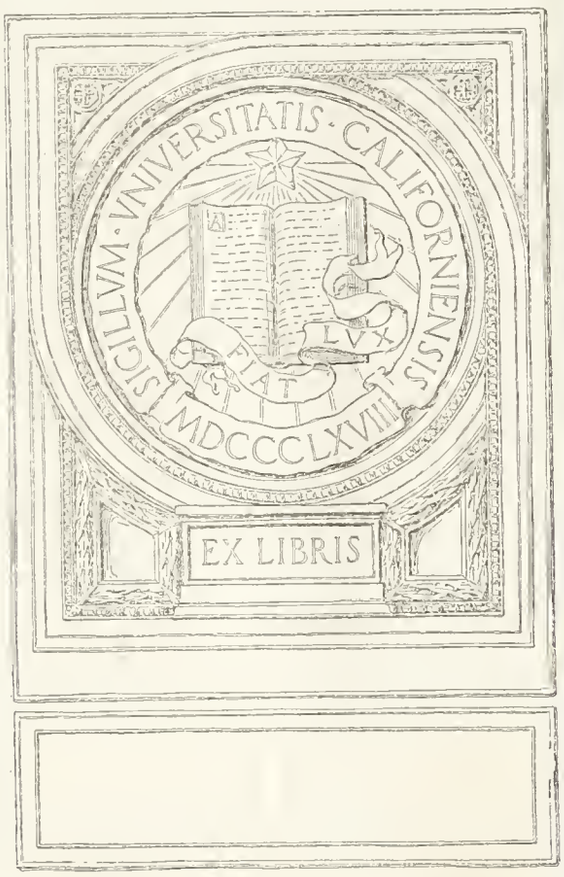
MEDICAL SCHOOL
LIBRARY



Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/californiastatej16unse

THE CALIFORNIA STATE JOURNAL OF MEDICINE

EDITED BY
ALFRED C. REED, M. D.

VOLUME XVI
1918

PUBLISHED BY THE
MEDICAL SOCIETY STATE OF CALIFORNIA
SAN FRANCISCO

OFFICERS

OF THE

MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

C. VAN ZWALENBURG, Riverside, President

JOHN H. GRAVES, San Francisco, 1st Vice-Pres. FERDINAND STABEL, Redding, 2d Vice-Pres.

SAXTON TEMPLE POPE, San Francisco, Secretary

COUNCILORS

C. G. KENYON, San Francisco, Chairman
(6th District. Term expires 1919)
T. C. EDWARDS, Salinas
(3d District. Term expires 1921)
E. N. EWER, Oakland
(7th District. Term expires 1920)
A. W. HOISHOLT, Napa
(9th District. Term expires 1920)
P. T. PHILLIPS, Santa Cruz
(5th District. Term expires 1920)
E. C. MOORE, Los Angeles
(2d District. Term expires 1919)
GEORGE H. AIKEN, Fresno
(4th District. Term expires 1921)
JOSEPH WM. JAMES, Sacramento
(8th District. Term expires 1919)
RENÉ BINE, San Francisco
(At Large. Term expires 1920)
O. D. HAMLIN, Oakland
(At Large. Term expires 1919)
H. A. L. RYFKOGEL, San Francisco
(At Large. Term expires 1921)
GEO. H. KRESS, Los Angeles
(At Large. Term expires 1920)
J. C. YATES, San Diego
(At Large. Term expires 1920)
G. G. MOSELEY, Redlands
(At Large. Term expires 1920)
J. C. KING, Banning
(1st District. Term expires 1921)

CONTENTS AND INDEX 1918

Abscess of Liver in Young Infant—A. J. Scott, Jr., M. D. 337
Accidents From Local Anesthetics..... 156
Address of President Wilson July 4, 1918, Mount Vernon 397
Ainley, F. C., M. D.—The Care of the Functioning Breast 36
Alderson, H. E., M. D.—Regulation of the Practice of Medicine in California Since 1914..... 232
Alvarez, W. C., M. D.—The Cause and Prevention of Post-Operative Gas Pains..... 338
American Women Doctors in Foreign Medical Service 311
American Women's Hospitals..... 371
Amebiasis: Its Radical Cure With Combined Emetin and Salvarsan Products — Herbert Gunn, M. D. 240
Angina, Vincent's With Report of a Case—Joseph M. King, M. D..... 334
Anti-Tuberculosis Program, Military..... 154
Aorta as Shown by Fluoroscopic Study, Disease of The—Samuel E. Bailey, M. D..... 490
Appendicitis in Childhood—Study of One Hundred Cases—Langley Porter, M. D..... 10
Arch Defects of the Human Foot—E. H. Smith, M. D. 256
Army Health 398
Army Nurses at Base Hospitals..... 514
Army Medical Examinations of the First Draft, The—Major Harry B. Reynolds..... 70
Arthroplasty of the Hip Joint, Murphy Method —Report of Four Cases—J. M. Burlew, M. D. 237
Ash, Rachael L., M. D. — The Prevalence of Streptococcal Infections 462
Asthma and Tuberculosis, The Interrelationship of—P. H. Pierson, M. D. 284
Autogenous Colon Vaccines in Eczema — Drs. Jackson and Pickard..... 330
A Message 476

B

Baer, Adolph B., M. D. — Headache Resulting From Pathological Intra-Oral and Intra-Nasal Conditions 133
Baer, Adolph B., M. D. — The Etiology and Symptomatology of Chronic Suppurative Otitis 253
Bailey, Samuel E., M. D.—Disease of the Aorta as Shown by Fluoroscopic Study..... 490
Barbat, J. H., M. D. 342
J. Henry Barbat Prize.....63-179
Barkan, Hans, M. D.—Some Ocular Defects in Mentally Retarded Children..... 183
Base Hospital Number Thirty..... 154
Beware of Swindlers..... 146
Bine, René, M. D.—Present Status of Health Insurance in California..... 4
Birtch, F. W., M. D.—Pre-Operative Investigation by Group Study Suggested as a Method for the Lowering of Surgical Fatalities..... 200
Birth Rate in Hungary, Decrease..... 274
Birth Registration in California—Adelaide Brown, M. D..... 519
Blenorrhea Neonatorum, Clinical Results Following Prophylactic Treatment with Silver Nitrate for—Alfred B. Spalding, M. D..... 526
Board of Medical Examiners..... 143
Boardman, W. W., M. D. — Hodgkins Disease and Its Treatment, With a Report of Cases. 125
Brain Tumors, Neurological Aspect of—W. F. Schaller, M. D. 336
Breast, The Functional Care of the—Frank C. Ainley, M. D. 36
Breed, Lorena M., M. D.—Metabolism and Disease 85
Breed, Lorena M., M. D.—Metabolism in Diabetes, Nephritis and Cholecystitis..... 327
Brown, Adelaide, M. D.—Birth Registration in California 519
Brown, Adelaide, M. D.—The Children's Year—An Opportunity in Preventive Medicine..... 414
Brown, J. M., M. D.—Granuloma of the Larynx 332
Brown, P. K., M. D.—Training of Nurses and Social Workers in the Present Emergency.. 281
Burger, Thos. O., M. D.—Backward Displacement of the Uterus..... 197
Burlew, J. M., M. D.—Arthroplasty of the Hip Joint, Murphy Method—Report of Four Cases 237
Butler, Edmund, M. D.—Acute Gastro-Duodenal Perforations 215
Butler, Edmund, M. D.—Acute Gastro-Duodenal Perforations 245

C

California Physicians in Service..... 59
California League for the Conservation of Public Health 440
Campiche, Paul. M. D.—Is Purgation Justifiable? 455
Campbell, W. H., M. D.—Report of a Case of Charcot Joint of the Spine..... 41
Carling, John, M. D.—The Treatment of Infantile Paralysis 138
Cardiospasm—T. J. Orbison, M. D..... 202
Cerebrospinal Fluid Findings in Herpes Zoster —W. F. Schaller, M. D. 453
Cerebrospinal Fluid, Permanganate Reduction Index of—E. A. Victors, M. D..... 175
Cerebral Oedema in Intracranial Trauma—A. S. Lobingier, M. D. 303
Cerebrospinal Fluid, Colloidal Mastic Reaction of—E. A. Victors, M. D. 32
Charcot Joint of the Ppine, Report of a Case of W. H. Campbell, M. D. 41
Church, Benj. F., M. D.—Sarcoma of the Choroid With Report of Two Cases..... 305
Clemons, E. Jay, M. D.—Internal Hemorrhoid Operation and After Care Under Quinine Urea Hydrochloride Anesthesia—E. Jay Clemons, M. D. 23
Children's Year Program, National—Adapted to California's Needs..... 321
Children's Year Program..... 519
Children's Year—An Opportunity in Preventive Medicine—Adelaide Brown, M. D..... 414
Civil Service Examination—Bureau of Child Hygiene 535
College Physicians and Surgeons, San Francisco 108-471
Colloquia 476-512
Colloidal Gold (Lange) Test in Diagnosis, U. C. Hospital—R. W. Harvey, M. D..... 170
Concerning Anesthetists 532
Concerning An Editorial..... 218
Condit, J. C., M. D.—Results from Pertussis Vaccine 529
Congenital Occlusion of the Choanae of the Nose—H. Y. McNaught, M. D..... 193
Congential Syphilis, The Prevention of by Antiluetic Prenatal Therapy — By Hans Lisser, M. D. 384
Conservation of Children—John Crawford, M. D. 493
Contents and Index for 1918.....i to viii
Correspondence .....
...51, 108, 143, 268, 310, 365, 393, 438, 471, 512, 531
Council Meeting 220
Council Meeting—155th Meeting of the Medical Society State of California..... 441
Council of National Defense—Harry M. Sherman 310
Council of National Defense..... 398
County Secretaries Take Notice..... 53
County Secretaries Take Notice..... 103
County Societies 394
Cystitis Expoliative—Granville MacGowan, M.D. 21
Crawford, John, M. D.—Conservation of Children 493

COUNTY SOCIETY.

Alameda County .....
.....54, 104. 147, 221, 264, 314, 394, 472, 510. 532
Contra Costa County.....54, 148, 472
Fresno County 55, 104, 148, 441
Humboldt County 148
Kern County 55, 148
Los Angeles County.....55, 105,
149, 221, 264, 312, 315, 366, 394, 441, 472, 510. 532
Marin County 224, 473
Mendocino County 57, 107, 224, 267, 317, 395, 473
Monterey County 107, 152
Napa County 317
Orange County 107, 225, 267, 511
Placer County 107
Sacramento County 57, 107, 152, 267. 396
San Bernardino County.....153, 511
San Diego County.107, 153, 268, 317, 396, 442, 474, 511
San Francisco County.....
.....57. 108, 153, 225, 268, 317, 397, 474, 512
San Joaquin County.....
.....58, 108, 153, 225, 317, 369, 397, 512
San Luis Obispo County..... 108
Santa Barbara County.....58, 154, 318
Santa Clara County..... 318
Santa Cruz County..... 154
Siskiyou County 59
Solano County 442
Sonoma County 397
Stanislaus County 108, 369
Tulare County 268, 369, 474
Yolo County 154

D

Davidson, A., M. D., Xanthoma Tuberosum Multiplex 333
Death Rate from Disease in American Armies 476
Deaths...66, 112, 158, 226, 274, 322, 408, 478, 514, 540
Del Monte Meeting..... 264
Del Monte Notice.....147, 220
Day, Robt. V., M. D.—Acute and Subacute Unilateral Infectious Nephritis Without Pyuria from the Affected Side..... 528

Dental Initiative—Guy S. Millberry, D. D. S... 450
Department of Pharmacy and Chemistry—Edited by Felix Lengfeld, Ph.....156, 270, 319, 401, 477
Diabetes, Clinical Aspects of the Fasting Treatment of—By A. H. Rowe, M. D..... 433
Diabetes, Dispensary Treatment of—A. S. Granger, M. D..... 524
Diabetes, Nephritis and Choleacistitis, Metabolism in—Lorena M. Breed, M. D..... 327
Dillon, James R., M. D.—Seminal Vesiculotomy in the Treatment of Gonorrheal Rheumatism 485
Duncan, Rex, M. D.—Radium in the Treatment of Uterine Cancer with Case Report..... 497
Dues of Members in Service..... 146
Dues of Members in Service..... 220

E

Ear, An Interesting Operative Case—C. F. Welty, M. D..... 31
Ear, Nose and Throat, Intracranial Complications of; Report of Some Unusual Cases with Autopsy Findings—Hill Hastings, M. D..... 521
Effect of Pneumatic Hammers on Health..... 308
Egeberg, J. C., M. D.—A Method of Suturing "Y" Shaped Wounds..... 464
Epidemic Diseases, Reporting of—Wm. C. Hassler, M. D.—Supplement to the October Journal, 1918.....
Examinations for Medical License, June, 1918—San Francisco 403
Exemption Board, Division 1, Northern California, The Work of the Medical Advisory Board—John Gallway, M. D..... 118
Editorial Comments 69, 449
Etiology and Symptomatology of Chronic Suppurative Otitis—Adolph B. Baer, M. D..... 253
Excerpts from Letters of Dr. George J. McChesney to Dr. Harry M. Sherman..... 144
Examinations in Foreign Language, License.. 512

EDITORIALS.

Advertising Value, Good..... 114
Alarms and Rumors..... 115
American Manufacture of Salvarsan..... 1
American Soldiers, Measurement of..... 326
Annual Meeting at Del Monte..... 67
Annual Meeting for 1919, Santa Barbara..... 515
Army Pharmaceutical Corps..... 412
Birth Rate, The Declining Civilized..... 228
California Doctors in Service..... 1
Care of the Child..... 410
Children's Year in California..... 410
Clipped Editorial, A..... 2
Color Blindness Among Seamen..... 375
Comfort Stations 377
Communal Kitchen 482
Conservation of Vitamins..... 2
Control of Cancer..... 68
Dead Baby or Dead Guinea Pig..... 161
Del Monte 113, 159, 227
Democracy vs. Tips..... 448
Dental Initiative 445
Department of Industrial Medicine..... 517
Drug Addiction, The Treatment of..... 324
Editorial Comments 3, 117, 163, 231, 280, 326, 377, 413, 483, 518
Eye Hazards 412
Fear and Epidemics..... 516
Fifty Thousand Medical Officers..... 446
Fourth Liberty Loan..... 445
First Draft Report of Provost Marshal General 228
Health Officer and the War..... 449
How to Obtain Commission..... 275
Influenza 479
Indemnity Defense Fund—Insurance and the.. 68
Important Change in United States Employment Conditions 447
Measles Epidemic 161
Medical Defense and Indemnity Defense Fund, Distinction Between 162
Medical Education in Time of War..... 278
Medical Mobilization 116
Medical Officers, An Imperative Appeal for... 275
Medical Officers in Army, Manuscripts from.. 231
Medical Reserve Corps of Army, Containing Need for 227
Mental Hygiene Movement in California..... 161
Navy Needs Medical Officers..... 116
New Criminology 412
Newspaper and the Doctor..... 481
New Plant Foods for Man..... 230
Normal Mind, Obsessions of the..... 68
Non-Essential Industry 448
Notice 373
Nurses for the Navy..... 230
Nutrition Classes 325
Passing of the Dinosaurs 373
Pathologic Exhibit 113
Periodic Physical Examination..... 2
Physicians' Commissions and the A. M. A..... 160
Physicians' Rebates from Dealers..... 224
Psychopathic Hospital Idea..... 481
Railroad Rates 67
Rebates from Druggists..... 279
Red Chevron 412
Red Cross Health Certificates, Importance of.. 324
Red Cross Hospital in France..... 517
Scientific Program 67
Scientific Program, Committee on.....113, 159
Shell Shock 515
Stand Behind the Boys..... 278
Social Insurance 280
Social Insurance, Legal Aspects of..... 325
Suppression of Quacks, The..... 279
This Means Business, Read It..... 323
Tuberculosis Situation 376
Unscientific Science 114
Universal Service 376
Urgent Need for Nurses..... 449
Vaso-Motor Symptoms of the Menopause, The 69
Venereal Disease 374
Venereal Disease and the Army..... 115
Venereal Disease Reports, New Regulation for 375
Vencreal Silence, The..... 3
Volunteer Medical Service Corps.....160, 446, 481
War Classification of Medical Colleges..... 116
War Message from President Van Zwalenburg 409

F

Flight Surgeons 483
Focal Renal Infections, A Contribution on—L. J. Roth, M. D..... 460
Fractures of the Long Bones, A New Device for Holding—J. A. Simpson, M. D..... 204
French, Will J.—The Prevention of Blindness Work of the State Industrial Accident Commission 377
Foreign Body Lodged in Lung and Removed After Eleven Years by Bronchoscopy—Paul R. Walters, M. D..... 42
Forty-seventh Annual Meeting of the Medical Society, State of California, Del Monte, April, 1918 .....
From Allentown—By Lieut. H. H. Wolfe..... 52

G

Gallwey, John, M. D.—Argument Against Compulsory Health Insurance 452
Gallwey, John, M. D.—The Work of the Medical Advisory Board for District Exemption Board, Division 1, Northern California..... 118
Gas Pains, The Cause and Prevention of Post-Operative—W. C. Alvarez, M. D..... 338
Gastro-Duodenal Perforations, Acute—Edmund Butler, M. D..... 215
Gastro-Duodenal Perforations, Acute—Edmund Butler, M. D. (Continued from April, 1918). 245
Gastroenterostomy—C. W. Lippman, M. D.... 38

575

Gillmore, Emma W., M. D.—An Unprecedented Opportunity for Women 507
Glenn, T. H., M. D.—Vaccine Therapy 205
Gonorrhea, Practical Value of the Complement Fixation Test for—Martin Krotoszyner, M. D. 90
Gonorrheal Rheumatism, Seminal Vesiculotomy in the Treatment of—James R. Dillon, M. D. 485
Gonorrhea in Women—W. E. Stevens, M. D... 260
Gottlieb, A., M. D.—The Prevention and Treatment of Localized Muscular Contractures.... 254
Graham, H. B., M. D.—Some Remarks on Laryngeal Affections 25
Granger, A. S., M. D.—Dispensary Treatment of Diabetics 524
Gunn, Herbert, M. D.—Amebiasis: Its Radical Cure with Combined Emetin and Salvarsan Products 240
Gundrum, F. F., M. D.—Rat Bite Fever with Report of Two Cases 16
Gundrum, F. F., M. D.—Nitro-Benzol Poisoning 252

H.

Harvey, R. W., M. D.—Colloidal Gold (Lange) Test in Diagnosis U. C. Hospital 170
Harvey, Richard W., M. D.—Treatment of Syphilis of the Central Nervous System..... 491
Hassler, Wm. C.—Reporting of Epidemic Diseases, Supplement to the October Journal, 1918 .....
Hastings, Hill, M. D.—Intracranial Complications of Diseases of the Ear, Nose and Throat; A Report of Some Unusual Cases with Autopsy Findings 521
Hay Fever, Spasmodic Vaso-Motor Disturbances of the Respiratory Tract with Special Reference to—Grant Selfridge, M. D..... 164
Headache Resulting from Pathological Intra-Oral and Intra-Nasal Conditions—Adolph B. Baer, M. D..... 133
Health Insurance in California, Present Status of—René Bine, M. D..... 4
Health Insurance Compulsory, Argument Against—John Gallwey, M. D..... 452
Health of Troops Urged Upon Doctors..... 400
Hemorrhoid Operation, Internal and After Care Under Quinineurea Hydrochloride Anesthesia —E. Jay Clemons, M. D..... 23
Hinman, Frank, M. D.—The Management of Surgical Risk. A review of 100 kidney and prostate operations and 50 cases of enlarged prostate not operated upon..... 211
Hodgkin's Disease and Its Treatment, with a Report of Cases—W. W. Boardman, M. D... 125
Hospitals, Nation's Information Bureau on.... 318
Hunt, R. H., M. D.—Mineral Springs and Some of Their Internal Uses..... 39
Hunt, R. H., M. D..... 365
Hunt, R. H., M. D.—"Over There"..... 471

I

Important Parcel Post Notice..... 269
Indemnity Defense Fund.....53, 102
Industrial Accident Commission, The Prevention of Blindness Work of the State—Will J. French 377
Influenza Prevention 531
Influenza, Spanish, Bulletin on..... 512
International Surgical Society..... 274
Intestinal Obstruction—Harlan Shoemaker, M. D. 430
Intestinal Obstruction—H. A. Johnston, M. D. 464
In Errata 401
Infantile Paralysis, The Treatment of—John Carling, M. D..... 136
Insurance Statistics 63
Is Purgation Justifiable?—Paul Campiche, M. D. 455
It Shall Not Pass..... 474
Irvine, H. G., M. D., and W. M. Dickie, M. D. —Social Problems of the War..... 423
Irvine, H. G., M. D., and Ethel M. Watters, M. D.—Venereal Disease Control in California 296

J

Jablons, Benj., M. D., and Dave E. Hart, A. B.—Complement Fixation in Tuberculosis... 79
Jackson, James A., M. D., and R. J. Pickard, M. D.—Autogenous Colon Vaccines in Eczema 330
Johnston, Herbert A., M. D.—Intestinal Obstruction 464

K

Keep the Man at the Front in Good Standing 146
Kelly, Frank L., M. D.—The Control of Epidemic Meningitis, With Some Observations, Made During an Epidemic at the U. S. Training Station, San Diego, California..... 247
Kidney Infections in Women—W. E. Stevens, M. D. 194
Kidney and Prostate Operations. The management of Surgical Risk. Fifty Cases of Enlarged Prostate Not Operated Upon—Frank Hinman, M. D..... 211
King, Joseph M.—Vincent's Angina, With a Report of a Case..... 334
Klotz, W. C., M. D.—The Differentiation of Syphilitic and Tuberculous Pulmonary Lesions 82
Kreutzmann, Henry J., M. D.—The X-Ray Treatment of Uterine Fibroids..... 501
Krotoszyner, Martin, M. D.—A Plea for a Complete Urological Diagnosis at One Sitting 378
Krotoszyner, Martin, M. D.—Practical Value of the Complement Fixation Test for Gonorrhea 90

L

Laboratory Technique Carried Out in Studies of Lobar Pneumonia in Base Hospital Laboratory, Camp Lewis, Washington, with Report of Substitution of Rabbits for White Mice, in Determination of Pneumococcus Types 300
Laryngeal Affections, Some Remarks on—H. B. Graham, M. D..... 25
Larynx, Granuloma of the—J. M. Brown, M. D. 332
Lengfeld, Felix, Ph. D.—Non-Beverage Alcohol 125
Lippman, C. W., M. D.—Gastroenterostomy.. 38
Lisser, Hans, M. D.—The Prevention of Congenital Syphilis by Antiluetic Prenatal Therapy 384
Lobingier, A. S., M. D.—Cerebial Oedema in Intracranial Trauma 303

M

MacGowan, Granville, M. D.—Exfoliative Cystitis 21
Mail for A. E. F..... 399
Maternity Hospitals, Government Rules for 157
Medical Military Experiences—By Major Bruce Ffoulkes 51
Medical Officers, Twelfth Naval District..... 369
Medical Society of the State of California.... 192
Medical Tax Due..... 538
Medical Women in War Service..... 366
Mehrtens, H. G., M. D.—The Passage of Drugs from Blood Serum 306
Mentally Retarded Children, Some Ocular Defects—Hans Barkan, M. D..... 183
Meningitis, The Control of Epidemic, with Some Observations Made During an Epidemic at the U. S. Training Station, San Diego, California—Frank L. Kelly, M. D... 247
Metabolism and Disease—Lorena M. Breed, M. D. 85
McClelland, E. S., M. D.—Refraction in Children 180

McNaught, H. Y., M. D.—Congenital Occlusion of the Choanae of the Nose..... 193
Millberry, Guy S., D. D. S.—The Dental Initiative 450
Mineral Springs and Some of Their Internal Uses—R. H. Hunt, M. D..... 39
Military News 59, 110, 154, 226, 269, 318, 369, 398, 442, 476, 513
Minutes of the House of Delegates—Del Monte, April, 1918 343
Drs. Montgomery and Culver—The Treatment of Warts 250
Mosquitoes and Flies, Guarding Camps from.. 400
Most Important to You—Do Not Let Your Dues Become Delinquent..... viii
Muscular Contractures, The Prevention and Treatment of—A. Gottlieb, M. D..... 254

N

Navy Calls for Binoculars..... 111
Neel, James Craig, M. D.—Diverticula of the Female Urethra..... 494
Nephritis, Acute and Subacute Unilateral Infections Without Pyuria from the Affected Side—Robert V. Day, M. D..... 528
Nephritis, The Value of Renal Functional Studies in the Prognosis and Treatment of —Samuel H. Hurwitz, M. D..... 287
Nitro-Benzol Poisoning—F. F. Gundrum, M. D. 252
New Members 66, 112, 158, 226, 274, 322, 372, 407, 478, 514, 540
Non-Beverage Alcohol—Felix Lengfeld, Ph. D. 125
Notice.....221, 264, 310, 407, 449, 476, 512
Notice to Physicians..... 476

O

Obstetrical Anesthesia—Caroline B. Palmer, M. D. 175
Obituary—F. Dudley Tait, 273; Frank W. Thomas, 273; Martin Krotoszyner, 322; Walter S. Johnson, 372; Fayette W. Birtch, 408.
Omissions and Corrections in Re Physicians in Service 154
O'Neill, B. J., M. D., and Robt. Pollock, M. D.—An Analysis of the First Two Hundred Cases Studied at the San Diego Diagnostic Clinic 428
Orbison, T. J., M. D.—Cardiospasm 202
Orthopedic Duty in England—Leonard W. Ely 110
Otitic Meningitis, Report of a Case of—E. C. Sewall, M. D..... 28

P

Palmer, Caroline B., M. D.—Obstetrical Anesthesia 175
Payment of Dues..... 146
Payment of Dues—Keep the Man at the Front in Good Standing..... 220
Peace with Germany, No Covenanted..... 506
Pelvic Inflammatory Disease in the Stanford University Clinic, The Results Following Operative Treatment—John A. Sperry, M. D. 388
Physicians and Dentists, A Plea for Better Cooperation Between—C. H. Wakeman, D. D. S. 466
Physician Wanted 268
Physicians in Navy Medical Service, California 110
Pierson, P. H., M. D.—The Interrelationship of Asthma and Tuberculosis..... 284
Pierson, Philip H., M. D.—Tuberculosis of the Eye 74
Pischel, Kaspar, M. D.—Training of Fixation and Fusion in Strabismus..... 391
Plastic Surgery of Nose and Ears—Grant Selfridge, M. D..... 416
Pneumonia, Lobar in Base Hospital, Camp Lewis, Washington, Substitution of Rabbits for White Mice in Determination of Pneumococcus Types—Captain K. J. Staniford... 300
Pomona Valley Hospital..... 318
Pottenger, F. M., M. D.—A Study of the Lung Reflexes in Pulmonary Tuberculosis..... 502
Porter, Langley, M. D.—Appendicitis in Childhood, Study of One Hundred Cases..... 10
Practice of Medicine in California Sine 1914, Regulation of the—H. E. Alderson, M. D..... 232
Prayer of Maimonides..... 51
President Bevan of the A. M. A..... 438
Public Health Activities Under One Control.. 399
Pubiotomy—H. A. Stephenson, M. D..... 457
Pulmonary Tuberculosis, A Study of the Lung Reflexes in—T. M. Pottenger, M. D..... 502

PUBLICATIONS.

American Medical Council on Pharmacy and Chemistry—Pub. A. M. A..... 365
American Illustrated Medical Dictionary (Dorland) 263
Anatomy of the Human Body—Pubr., Lea & Febiger 531
Antiseptics, Handbook of—Pubr., Macmillan Co. 102
Blood Transfusion, Hemorrhage and the Anemias—Pubr., J. B. Lippincott..... 509
Clinical Diagnosis by Means of Laboratory Methods—Pubr., Lea & Febiger..... 392
Clinical Medicine—Pubr., W. B. Saunders Co.. 393
Carrel Method, Technic of Irrigation Treatment of Wounds, by—Pubr., Paul B. Hoeber 102
Composition of Certain Patent and Proprietary Medicines—By John Phillips Street..... 469
Dental and Oral Radiography. Text Book for Students and Practitioners of Dentistry—Pubr., C. V. Mosby Co..... 469
Dermatology, Principles and Practice of—Pubr., D. Appleton 101
Diseases of the Chest and Principles of Physical Diagnosis—Pubr., W. B. Saunders..... 470
Diseases of Children: A Manual for Students and Practitioners—Pubr., Lea & Febiger..... 102
Diseases of the Heart for General Practitioner —Rebman Co..... 143
Diseases of the Male Urethra—Pubr., W. B. Saunders Co..... 509
Diseases of the Skin—Pubr., J. B. Lippincott Co. 365
Diseases of Women—Pubr., Mosby..... 143
Elements of Pediatrics for Medical Students —Pubr., Macmillan 310
Emergencies of a General Practice—Pubr., C. V. Mosby..... 393
Essentials of Dietetics; Text-Book for Nurses —Pubr., C. V. Mosby..... 530
Essentials of Materia Medica and Therapeutics for Nurses—Pubr., Lippincott..... 469
Eye, Ear, Nose and Throat—Pubr., Lea & Febiger 50
Gynecology, New System of—Pubr., Macmillan Co. 50
Hand-Book of Operative Surgery—Pubr., Wood 309
Handbook of Gynecology—Pubr., C. V. Mosby 217
Hodgen Wire Cradle Extension Suspension Splint—Pubr., C. V. Mosby..... 507
History of Medicine—Pubr., W. B. Saunders Co. 309
Hygiene of the Face and Cosmetic Guide—Pubr., Dutton 217
Hygiene for Nurses—Pubr., C. V. Mosby..... 530
Impotence and Sterility with Abberations of the Sexual Function and Sex-Gland Implantation—Pubr., Riverton Press..... 217
Infant Feeding—Pubr., W. B. Saunders..... 508
Interpretation of Dental and Maxillary Roentgenogram—Pubr., C. V. Mosby Co..... 508
Laboratory Manual of Qualitative Chemical Analysis—Pubr., W. B. Saunders Co..... 469
Lecture Course to Physicians on Natural Methods in Diagnosis and Treatment..... 392

Lessons from the Enemy—Pubr., Lea & Febiger 508
Manual No. 2. Notes for Army Medical Officers—Pubr., Lea & Febiger..... 263
Manual No. 3. Military Ophthalmics Surgery—Pubr., Lea & Febiger..... 263
Manual of Anatomy—W. B. Saunders Co.... 142
Materia Medica, Pharmacology, Therapeutics and Prescription Writing. For Students and Practitioners—Pubr., W. B. Saunders Co... 262
Medical Clinics of North America—Pubr., W. B. Saunders Co.....101, 309, 393, 469
Medical Vocabulary—Pubr., P. Blakiston's Son & Co. 531
Medical Service at the Front—Pubr., Lea & Febiger 507
Medical War Manual No. 7. Military Surgery of Zone of the Advance. By De Tarnowsky—Pubr., Lea & Febiger..... 470
Mental Diseases. A Clinical Manual—Pubr., W. B. Saunders Co..... 365
Military Hygiene and Sanitation—Pubr., W. B. Saunders Co. 531
Modern Operative Bone Surgery, with Special Reference to Treatment of Fractures—Pubr., F. A. Davis Co..... 469
New and Non-Official Remedies—Pubr., A. M. A. 365
Nursing in Diseases of Childhood—Pubr., C. V. Mosby 530
Nutrition, Elements of Science—Pubr., W. B. Saunders Co. 101
Nutrition and Clinical Dietetics—Pubr., Lea & Febiger 470
Obstetrics—Pubr., D. Appleton..... 102
Obstetrics—Yearbook Publishers 142
Obstetrics, Talks on—Pubr., Macmillan..... 263
Oral Sepsis in Its Relationship to Systemic Disease—Pubr., C. V. Mosby..... 530
Organic Drugs, Guide to—Pubr., Eli Lilly & Co. 263
Practical Dental Metallurgy—Pubr., C. V. Mosby 530
Radium Therapy in Cancer—Pubr., Paul Hoeber 49
Roentgen Diagnosis of Diseases of the Alimentary Canal—Pubr., W. B. Saunders Co. 50
Skin, Diseases of the—Pubr., C. V. Mosby Co. 50
Surgical Applied Anatomy—Pubr., Lea & Febiger 508
Surgical Clinics of Chicago—Pubr., W. B. Saunders Co. 49
Pharmacology, Therapeutics and Preventive Medicine—Year Book Publishers..... 142
Physiological Chemistry with Experiments. An Intermediate Text Book of—Pubr., C. V. Mosby Co. 102
Physical Diagnosis—Pubr., C. V. Mosby Co... 101
Physical Exercises for Invalids and Convalescents—Pubr., C. V. Mosby Co..... 102
Postgraduate Medicine, Prevention and Treatment of Disease—Pubr., D. Appleton..... 262
Practical Dietary Computer—Pubr., Putnam Co. 309
Practical Treatment—Pubr., W. B. Saunders Co. 101
A Practical Text Book of Infection, Immunity and Specific Therapy—Pubr., W. B. Saunders Co. 308
Preventive Medicine and Hygiene—Pubr., D. Appleton Co..... 142
Principles of Hygiene—Pubr., W. B. Saunders Co. 470
Principles of Mental Hygiene—Pubr., Macmillan Co. 262
Quarterly Cumulative Index to Current Medical Literature, A. M. A..... 531
Radio-Therapeutics—Pubr., Macmillan Co..... 438
Reclaiming the Maimed—Pubr., Macmillan Co. 469
Sanitation for Medical Officers—Pubr., Lea & Febiger 102
Spleen and Anemia—Pubr., Lea & Febiger... 393
Surgical Clinics of Chicago—Pubr., W. B. Saunders Co.....101, 365, 392, 470
Surgical Nursing, Principles of. A Guide to Modern Surgical Technic—Pubr., W. B. Saunders Co. 365
Surgical and War Nursing—Pubr., C. V. Mosby. 530
Surgery and Diseases of the Mouth and Jaws—Pubr., C. V. Mosby Co..... 217
Syphilis, The Third Great Plague. A Discussion of—Pubr., W. B. Saunders Co..... 309
Syphilis and Public Health—Pubr., Lea & Febiger 393
Technique of Operations on the Bones, Joints, Muscles and Tendons—Pubr., Macmillan Co. 364
Text Book of General Bacteriology—Pubr., W. B. Saunders Co..... 217
Text Book of Obstetrics—Pubr., W. B. Saunders Co. 508
Text-Book of Physiology for Nurses—Pubr., C. V. Mosby 530
Theoretical and Applied Colloid Chemistry—Pubr., Wiley 143
The Prescription, Therapeutically, Pharmaceutically, Grammatically and Historically Considered—Pubr., C. V. Mosby Co..... 217
Thyroid and Thymus—Pubr., Lea & Febiger. 308
Treatment of Cavernous and Plexiform Angiomata by the Injection of Boiling Water—Pubr., C. V. Mosby Co..... 469
Treatise on Regional Surgery—Pubr., Blakiston 309
A Text Book of the Practice of Medicine—Pubr., W. B. Saunders Co..... 308
Typhoid Fever Considered as a Problem of Scientific Medicine—Pubr., Macmillan Co.. 509
War Surgery, American Addresses—Pubr., W. B. Saunders Co..... 263
War Wounds, The Treatment of—Pubr., W. B. Saunders Co. 508
Way Out of War—Pubr., Doubleday, Page & Co. 365

R

Rat Bite Fever with Report of Two Cases—F. F. Gundrum, M. D..... 16
Rectal Hemorrhage—A. J. Zobel, M. D..... 207
Red Cross, Doctors Wanted for..... 393
Red Cross, First Semi-Annual Report of War Council of the American..... 64
Refraction in Children—E. S. McClelland, M. D. 180
Reed, A. C., M. D.—Schistosomiasis in California 293
Resolutions Adopted by the Council of the Medical Society, Los Angeles, Nov. 24, 1917. 103
Resolutions Adopted by the Council of the State Society at its meeting held in Los Angeles, November 24, 1917..... 53
Review of War Surgery..... 269
Resigned 112, 226, 274, 372, 478
Reynolds, Harry B., Major—The Army Medical Examinations of the First Draft..... 70
Roth, L. J., M. D.—A Contribution on Local Renal Infections 460
Rowe, A. H., M. D.—Clinical Aspects of the Fasting Treatment of Diabetes..... 433

S

Sale of Explosives..... 271
San Diego Diagnostic Group Clinic, an Analysis of the First Two Hundred Cases Studied at the—Drs. B. J. O'Neill and Robt. Pollock 428
San Francisco Polyclinic War Letters..... 218
Sarcoma of the Choroid with Report of Two Cases—B. F. Church, M. D..... 305
Saving Grain, Sugar and Glycerine..... 270
Schaller, Walter F., M. D.—Spinal Cord Changes in Combined Sclerosis..... 44

Schaller, W. F., M. D.—Neurological Aspect of Brain Tumors 336
Schaller, W. F., M. D.—Cerebrospinal Fluid Findings in Herpes Zoster..... 453
Schistosomiasis in California—A. C. Reed, M. D. 293
Schneider, E. H., M. D.—Syphilis of the Thyroid Gland, Report of a Case..... 484
Scott, A. J. (Jr.), M. D.—Abscess of Liver in Young Infant 337
Scientific Program 139, 185
Secretaries of County Societies..... 221
Selected Aphorisms from Isaac Judaeus..... 204
Selfridge, Grant, M. D.—Plastic Surgery of Nose and Ears..... 416
Selfridge, Grant, M. D.—Spasmodic Vaso-Motor Disturbances of the Respiratory Tract, with Special Reference to Hay Fever..... 164
Service to Men En Route..... 269
Sewall, E. C., M. D.—Report of a Case of Otitic Meningitis 28
Shall We Use Our Grain for Bread or for Beer? A Pressing Question..... 63
Shoemaker, Harlan, M. D.—Intestinal Obstruction 430
Simmons, S. E., M. D.—A Conservative Physician's View of the Proposed Social Health Insurance Schemes 18
Simpson, J. A., M. D.—A New Device for Holding Fractures of the Long Bones..... 204
Smith, E. H., M. D.—Arch Defects of the Human Foot 256
Social Health Insurance Schemes. A Conservative Physician's View of the Proposed—S. E. Simmons, M. D..... 18
Social Health Insurance, Attitude of Gubernatorial Candidates on..... 440
Social Insurance 474
Social Insurance, Tentative Report on—Drs. Wenzlick, J. Ross Moore and P. T. Gerson 72
Social Problems of the War—By Drs. H. G. Irvine and W. M. Dickie..... 423
Soldiers and Identification, Head Measurements of 370
Somewhere in France—From G. B. Wilcox, M. D. 218
Spalding, Alfred Baker, M. D.—Clinical Results Following Prophylactic Treatment With Silver Nitrate for Blenorrhea Neonatorum..... 526
Spencer, J. C., M. D.—The Venereal Situation Among the Forces at War..... 5
Sperry, John A., M. D.—Results Following Operative Treatment of Pelvic Inflammatory Disease in the Stanford University Clinic... 388
Sperry, John A., M. D.—Venereal Disease Control by Board of Health of San Francisco 120
Spinal Cord, Changes in Combined Sclerosis —Walter F. Schaller, M. D..... 44
Spinal Fluid, The Passage of Drugs from Blood Serum to—H. G. Mehrtens, M. D.... 306
Standard Medical Nomenclature..... 318
Stanford-Polyclinic Colloquia 439, 540
Stanford University Medical School—Popular Medical Lectures 63
State Board of Health.....63, 155, 226, 271, 320, 370, 401, 477, 540
State Board of Medical Examiners.....112, 402, 443, 535, 538
State Board of Pharmacy..... 156
State Board of Charities and Correction..... 157
State Society 264
Statute Regulating Sale of Poisons..... 156
Stevens, W. E., M. D.—Kidney Infections in Women 194
Stevens, W. E., M. D.—Gonorrhea in Women.. 260
State Society.....53, 102, 146, 220, 310, 440
State Dues for 1918..... 53
State Dues for 1918..... 103
Stephenson, H. A., M. D.—Pubiotomy..... 457
Streptoccal Infections, The Prevalence of—Rachael L. Ash., M. D..... 462
Surgeon U. R. Webb, U. S. N..... 217
Surgical Fatalities, Pre-operative Investigation by Group Study Suggested as a Method for the Lowering of—F. W. Birtch, M. D..... 200
Syphilis of the Central Nervous System, Treatment of—Richard W. Harvey, M. D..... 491
Syphilis of the Thyroid Gland—Report of a Case—E. H. Schneider, M. D..... 484
Syphilitic and Tuberculous Pulmonary Lesions, The Differentiation of—W. C. Klotz, M. D. 82

T

Teaching the Blind..... 147
The Value of Renal Functional Studies in the Prognosis and Treatment of Nephritis—Samuel H. Hurwitz, M. D..... 287
Those Registered at the Forty-seventh Annual Meeting, Del Monte, 1918..... 363
Tobacco Smoke and Tuberculosis..... 529
Training of Fixation and Fusion in Strabismus—Kaspar Pischel, M. D..... 391
Training of Nurses and Social Workers in the Present Emergency—P. K. Brown, M. D... 281
Transferred 112, 158, 226, 274, 372
Tuberculosis, Complement Fixation in—Benj. Jablons, M. D., and Dove E. Hart, A. B... 79
Tuberculosis of the Eye—Philip H. Pierson, M. D. 74
Tuberculosis Needs 226
Tumors of the Kidneys, Pyelograms—Granville MacGowan, M. D..... 138

U

Unprecedented Opportunity for Women—Emma W. Gilmore, M. D..... 507
Uterine Cancer, Radium in the Treatment of with Case Report—Rex Duncan, M. D..... 497
Uterine Fibroids, The X-Ray Treatment of—Henry J. Kreutzmann, M. D..... 501
Urethra, Female, Diverticula of the—J. Craig Neel, M. D..... 494
Urological Diagnosis at One Sitting, A Plea for a Complete—Martin Krotoszyner, M. D. 378
Uterus, Backward Displacement of the—Thos. O. Burger, M. D..... 197

V

Vaccine, Results from Pertussis—J. C. Condit, M. D. 529
Vaccine Therapy—T. H. Glenn, M. D..... 205
Venereal Disease Control in California—H. G. Irvine, M. D., and Ethel M. Watters, M. D. 296
Venereal Disease Control by Board of Health of San Francisco—John A. Sperry, M. D... 120
Venereal Diseases, Bureau of..... 320
Venereal Situation Among the Forces at War —John C. Spencer, M. D..... 5
Victors, E. A., M. D.—Cerebrospinal Fluid Permanganate Reduction Index of..... 175
Victors, E. A., M. D.—Colloidal Mastic Reaction of Cerebrospinal Fluid..... 32
Volunteer Medical Service Corps..... 269
Volunteer Medical Service Corps of the United States 513

W

Wake, C. H., D. D. S.—A Plea for Better Co-operation Between Physicians and Dentists. 466
Walters, Paul R., M. D.—Foreign Body Lodged in Lung and Removed After Eleven Years by Bronchoscopy 42
War Refugees in Jerusalem..... 468

Warts, The Treatment of—Drs. Montgomery and Culver 250
Weeding Out Incompetent Officers..... 111
Welty, C. F., M. D.—An Interesting Operative Ear Case 31
Wenzlick, Moore & Gerson, Drs.—Tentative Report on Social Insurance..... 72
Women in Medical Corps..... 399
Wounds, "Y" Shaped. A Method of Suturing —J. C. Egeberg, M. D..... 464

X

Xanthoma Tuberosum Multiplex—A. Davidson, M. D..... 333
X-Ray at Front Trenches..... 399

Z

Zobel, A. J., M. D.—Rectal Hemorrhage..... 207

DO NOT LET YOUR DUES BECOME DELINQUENT

IF YOU DO YOU LOSE THE LEGAL

PROTECTION OF THE STATE

SOCIETY

PAY YOUR DUES EARLY
and DON'T TAKE CHANCES

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

Publication Committee:
E. C. FLEISCHNER, M. D. A. B. GROSSE, M. D. SOL HYMAN, M. D. GEORGE H. EVANS, M. D.

Advertising Committee:
R. E. BERING, M. D. THOS. E. SHUMATE, M. D.
Representative of the Council, E. N. EWER, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn .....
Humboldt .....
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin .....
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa .....
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, San Bernardino
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. P. H. Reilly, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo .....
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI JANUARY, 1918 Number 1

CALIFORNIA DOCTORS IN SERVICE.

On another page of this issue of the JOURNAL appear the names of those physicians of California who have been commissioned in the government medical services. The list is incomplete and may contain inaccuracies. Partly to remedy these two faults is it published. It is requested that each reader will particularly scrutinize it and report at once any omission or inaccuracy noted. The latest figures now available cover only through the early part of November. It is requested that all commissions accepted up to December 31 be reported at once if not already on this list.

The list is published, however, not solely for the sake of obtaining a corrected roll, but also for the more noble purpose of doing honor to those of our number who have been so fortunate as to receive commissions. Their honor is to some small extent reflected on us who stay behind for the time. We are proud of them and we are proud to belong to their profession. As they have gone and we stay behind, it behooves us to do our bit with a right good will that their sacrifice be not fruitless, that their exertions be not neutralized by lack of enthusiastic and effective support. From time to time various avenues of home service have received comment in the JOURNAL. Behind all avenues of service, it behooves us to have the spirit of sacrifice for which President Wilson pleads. It behooves us to keep the home fires burning, not only for ourselves but for those who have gone.

It is hoped from time to time to publish supplemental service lists.

AMERICAN MANUFACTURE OF SALVARSAN.

The Federal Trade Commission has entered orders for the license of three firms to manufacture and sell salvarsan under the American name of "arsphenamine." The control of standards and quality of product will devolve upon the Federal Public Health Service. The three firms to be licensed, are the Dermatological Research Laboratories of Philadelphia, the Takamine Laboratory of New York, and the Fabwerke Hoechst Company (Herman A. Metz Laboratory) of New York. The original patent was issued to Paul Ehrlich and Alfred Bertheim, both Germans. It is announced officially that some of the licensees in this country will supply the drug at the price of one dollar per dose to the Army and Navy, $1.25 to hospitals, and $1.50 to physicians.

An interesting comparison lies between the action of Ehrlich in patenting salvarsan, and the action of the discoverer of tethelin in also patenting his discovery but in vesting all rights to the patent in a university with the special object of making it universally available and at the same time of turning to beneficent and scientific purposes any financial gain to be derived from it. The Principles of Ethics of the American Medical Association succinctly state, "It is equally de-

rogatory to professional character for physicians to hold patents for any surgical instruments or medicines." The German Ehrlich profited by his salvarsan patent. The American Robertson demonstrated again the prevailing spirit of service and social efficiency which characterize American medicine and science.

PERIODIC PHYSICAL EXAMINATION.

It is such an old story. Every doctor knows it. Most patients know it. But the trouble is that he and they are too busy to remember it. Both are prone to let well enough answer. No man can get himself in sufficient perspective to see his own beginning physical and mental infirmities. Few can do it for their moral shortcomings. Even the doctor himself does not always elicit the significant history of a little undue weariness, or slight breathlessness, or hazy vision, or inability to make physical and mental adjustments in reflex fashion. All the numerous little danger signals which a careful history will bring to light are of course really more important than leading symptoms and syndromes at a later stage. And the whole question consists first in getting the man in apparent health to recognize this modern form of life insurance, and in the second place to get the physician to deliver *his* side of the obligation and discover the danger signals when they are present.

How many closeted skeletons of the doctor's memory rise at the suggestion of the case whose nervous eccentricities did not lead to a Wassermann reaction, and who a few years later was a paretic? How many cardiacs and nephritics are such because the doctor did not recognize the early stages, or in any case, did not warn the victim of his peril and the way of escape? It is evident that there are two sides to the question of periodic medical examinations. And the doctor's side is equally important, if not so slighted, as the patient's side.

Consider it as life insurance, consider it as business insurance, consider it from the standpoint of statistics of the high percentage of unsuspected defects and disease uncovered in every group examination,—consider it as the personal point of attack of the modern science of preventive medicine,—and in each case the argument is lucid, and to most of us, self-evident.

Every physician should preach and practice periodic medical examination, at least once yearly when in apparent health. It is reasonable, and represents the best development of the physician's art, the prevention of disease in the individual.

THE CONSERVATION OF VITAMINS.

With the present concern over food supply, comes the pitfall for both institutions and individuals of a dietary deficient in vitamins. We do not know what vitamins are. The name is doubtless a misnomer. Accessory food substances necessary for growth and maintenance of healthy nutrition would better describe them. Yet the name has achieved an accepted position in popular and scientific nomenclature, and serves a useful function. We at least know that certain diseases can be prevented and cured by relieving a dietary fault of which the specific nature is unknown, although what we are pleased to call vitamins are lacking.

Editorial attention was called recently to oleomargarine as a nutritive and economic substitute for butter. In the question of adequate vitamin supply we are likewise concerned not alone with maintaining the necessary nutritive equilibrium of the body, but very practically with supplying the required vitamin fraction at a feasible cost. As with the problem of adequate fat supply, so here that large class of the population is affected whose dietary is modified by increasing food costs. While it is not likely that epidemic scurvy, beriberi or pellagra will follow war food conditions, it is most probable that forms of malnutrition will be in evidence which are important in themselves and which will predispose to other disease and to physical inefficiency.

Dietary rules for the prevention of vitamin deficiency have been well summarized and simplified by Vedder.[1] Bread should be made from whole wheat flour if it is a staple article of diet. Where rice is eaten to a considerable extent it should be the brown under-milled variety. At least once weekly, such legumes as fresh beans or peas should be served. Fresh fruits and vegetables should be eaten several times weekly, barley should be used in all soups, and white potatoes and fresh meat at least once weekly, and preferably once daily. Canned goods should be employed in minimal amounts. If corn meal is used as a staple, it should be the yellow water-ground whole meal.

It is important to remember further that vitamins are inactivated by high temperatures and by certain chemical processes. It was found by Voegtlin Sullivan[2] that coincident with a decreased use of vitamin-rich foods in certain endemic pellagrous areas, there had occurred an increased use of soda in place of yeast to raise bread, and also for addition to vegetables such as beans for instance, to soften them and hasten the process of cookery. It was demonstrated that such alkalinization served to inactivate the vitamins of the vegetables and wheat-bread. This is another dietary danger easily avoided.

With reference to costs, it is desired merely to call attention to the excess costs of cereals in cartons. Rolled oats and rolled wheat can be purchased in bulk at lower cost and have a food value greater than many of the cereal preparations in customary use, and both are appetizing.

A CLIPPED EDITORIAL.

"The fake medicine business represents profits—fat profits—for many concerns, directly and indirectly. It represents also deception and fraud, swindles, and deliberate, calculated obtaining of money under false pretenses, as the *Tribune* has shown. It exploits sickness and suffering for the sake of gain and leaves the victims in worse case physically and fianancially than when they began experiments with the 'cures.' There should be no

1 Jour. A. M. A., 1916, LXVII, 1494.
2 Pub. Health Rep., Apr. 14, 1916.

tenderness for those who make money in such devious, dangerous ways. Halfway measures should not be considered."—*New York Tribune.*

"Whenever the patent medicine quack is attacked we hear the old familiar cry of 'personal liberty' and persecution. The quack shrieks that there is nothing wrong in his business and that he is being persecuted by the 'Doctor's Trust.'

"When the newspapers of this country finally reach the high plane of keeping faith with their readers and placing editorial ethics above business office receipts, they will not permit a patent medicine advertisement to appear in their columns, and that will mean the death of the patent medicine business."—*The Labor World.*

"The quack doctors named in the *Tribune*, and a host of unnamed others, are a disgrace to the medical profession and a menace to the city. They prey upon a class of people that can least afford to be preyed on. It is from among the hard-working men in the lowest status of our society that they gather their victims. It is the wages that were earned not only in the sweat of the brow but in blood, in the ever-present danger of injury or death through the hazards of the trade, that flows into the coffers of these charlatans. . .

". . . But they do not content themselves merely with the victims which their lurid posters pick up from among the ignorant fellows in the street. They invade the homes of the miserably poor with advertisements and doctor books printed in all languages, and poison the atmosphere of these homes.

"The State should find a way of stopping the distribution of their filthy circulars. They are as obscure as they are vicious. And the public should see to it that the portion of the press which accepts the advertisements of these quacks ceases to outrage the eye and feeling of the reader."—*The Chicago Daily Tribune.*

Will our readers please send in clippings from all California newspapers along this line. They are worth recording.

THE VENEREAL SILENCE.

It is full time that the old superstitious fear of naming syphilis and gonorrhea in public and in private be abolished. How are they to be fought if they must always be unnameable? Why should a current Government publication even speak of "virulent blood poison," when it means syphilis? How many newspapers will use the correct names for these diseases, when they are unashamed at the bold portrayals of the quack advertisers, and patent medicine testimonials, and police court dregs which are spread on a different page? How many public speakers will call them by name when need arises? Why should it be shameful to know their peril and to study their prevention?

The splendid policy and work of the California State Board of Health in protecting the Army camps from venereal disease has been noted and cannot receive too high commendation. The splendid policy and work of the Army and Navy authorities in the same direction deserves the commendation and support of every American. We have, and surely hope to have in the future, a military force unique in history for its freedom from venereal disease. This objective will not be accomplished, however, by a continuance of the out-grown policy of silence on the subject of these diseases. In civil life let us emulate the worthy example here set before us. Let us call syphilis by its name. Let us go at the stupendous problem of popular education in a sane manner by foregoing this old silence.

EDITORIAL COMMENT.

Leather is decreasing and its price is advancing. This sentence has become trite in many applications. And here, as in many of the similar situations, there seems to be a way out. The Journal of the American Veterinary Medical Association for December, 1917, states that pig skins are largely wasted, in spite of the fact that they represent the only substitute on an adequate scale for cow hide. They are superior to cow hide in that they resist surface wear better. Their durability and elegance are attested by a small line of saddles and fancy leather goods now available. Tests have shown them a fully satisfactory material for shoes. There is reported a deficiency of some three million cow hides. The pig skins now wasted on bacon, where they are of neither ornamental nor nutritional value, would doubly replace this shortage. It might be added that the Chinese, who have so much to teach us Westerners, use pig skin for trunks, boxes, and other heavy wear, and it wears like a pig's nose. It is remarkable how many things we are learning to substitute, and to do without as a result of the war. To a great extent this is an economic and social blessing.

In Science for November 30, 1917, Dr. C. E. K. Mees draws an interesting comparison between the process of assimilation in the human economy, and the process of the increase of scientific knowledge in the social economy. There is the production of new knowledge by laboratory research, which corresponds to the preparation and supply of food materials. There is the publication of this knowledge in papers and scientific reports. Finally there is the digestion of this knowledge and its absorption into the general mass of knowledge by the agency of critical comparison. The moral might be added that it is never wise to color facts or force conclusions. The process of digestion of knowledge is essential for its assimilation into the general fund of knowledge, and this process cannot be hurried. The conservatism of the established order is always a good thing, as it aids digestion in this sense and prevents fevers and sudden perversions of social metabolism.

The Principles of Ethics of the American Medical Association states that it is "derogatory to professional character for physicians to accept rebates on prescriptions or surgical appliances." If this is true, then any doctor who receives a rebate from the maker of artificial limbs, trusses, belts, etc., is acting in an unethical and unprofessional manner.

It is interesting to note the new advertisers appearing in the Journal; also to note the new books, instruments and other medical requirements advertised by the older advertisers. Part of the educational value of the Journal lies in keeping familiar with the articles advertised. It is worth while whether you expect to buy or not. All advertisers in this Journal pass a rigid scrutiny and are reliable and ethical. It is to their interest to put their best foot forward and they do it. Therein lies a real chance for the busy doctor to keep in touch with commercial scientific progress. Do *you* do it?

Special Articles

PRESENT STATUS OF HEALTH INSURANCE IN CALIFORNIA.

By RENÉ BINE, M. D., San Francisco, Chairman of the Committee on Health Insurance of the State Society.

A very prominent gentleman, recently connected with our State government, told us not very long ago that in his opinion, Health Insurance of some sort was so sure to come as the result of public demand, that our office seekers would fall over themselves in their eagerness to indorse such measures, aye, even loudly bringing forth claims of priority in the discovery of the need for such legislation.

He furthermore told us that for a long time the bankers of this State had consistently opposed new banking laws, and would do nothing to help formulate them. To-day they openly admit that they would not go back to the old system if they could.

There is no doubt, and none of us can deny that lack of organization in the medical profession causes much waste. We often do not realize how great the waste really is. In our homes we probably all thought we were economical, until we began to "Hooverize." The railroads managed to make money and apparently do good work, until real efficiency was needed; then they had a great fall, and all the railroad presidents and all the country's bosses are trying to get them together again.

The Social Insurance Commission of the State of California has proposed an amendment to the constitution which, if passed, will enable the legislature to establish a real insurance system. The legislature does not meet in 1918. Nothing can be done therefore towards passing any Health Insurance bill until 1919, provided the amendment is carried in November 1918.

In the meantime, let us, the medical profession, try and work out our own reforms if possible and see to it that, come what may, we protect the community from legislation unless it be practical, sane and desirable.

Your committee published its first report in the June 1917 issue, and to this your attention is again called. We are now debating a number of points, which we are going to detail here, in the hope that those interested will take the time to study them, and the time and energy to write to us, expressing their views. We want help; we want constructive criticism. Remember, please, that we are apt in this, as in other matters, to sit back and feel that "we are satisfied with the present order of things and, well, if something must be done,—oh, well, let George do it."

In April your Committee on Social Insurance will report further on its work. It is going ahead upon the assumption that if the people of our State want and do vote for Health Insurance, the Medical Society of the State of California must help *frame* the final bill and practically *dictate* the actual medical features of the bill.

How does the medical profession of England, after five years' practical experience, regard the Health Insurance Act? "Favorably," finds the British Medical Association after a painstaking inquiry among all local branches and panel committees. And, the Association's Committee remarks, "the degree of unanimity so far disclosed is somewhat remarkable."

The report, which has appeared in the British Medical Journal, points out minor defects in administrative detail that may be easily corrected and suggests that the scheme, which is proving a distinct gain to the medical profession as well as to the public health, be still further expanded.

The points we are studying, and which we would submit to your earnest consideration, follow. We, of course, are assuming the possible passage of a Health Insurance bill. It might be well for County Societies to devote meetings to these topics. When we have gotten a little further in our work we hope to arrange for speakers to visit societies desiring them.

1. Basis of remuneration of physicians.
   (a) salary basis (full or part time men?)
   (b) Fee schedule as at present established for the industrial accident work.
   (c) Capitation.

Growth of *contract* medicine should be recognized—either (1) salary work, when contract made by corporation, or (2) very small capitation, as witness usual lodge salary of $2 per annum per insured, to treat members and families.

Some step in direction of medical and hospital service within the financial grasp of wage earners is bound to be taken. The question is, what step? Health Insurance, through the contributions of employers, as well as employees, and help from the State, offers a source of income larger than possible now for this sort of work.

Also, capitation system or salary system (as in vogue in England) offers possibility of practice of preventive medicine. This could not be had under fee system. Note testimony contained in the English reports in regard to the benefits of the capitation system from a medical standpoint.

Capitation system offers chance for free choice of doctors. Salary system does *not.*

2. Remuneration and Regulation of Specialists.
   (a) Should a different basis of remuneration be adopted for "specialist service?" Should higher standards of remuneration be adopted for specialist service?
   (b) If not, how could you obtain the services of good specialists?

(c) How will it be determined whether an M. D. is a specialist or not?
(d) Should you permit the specialist to be on call for Health Insurance work only part of his time, and require the general practitioner to be on call at any time?

3. Possibilities of Group Medicine Under Health Insurance Organization.
(a) Do you consider it practical to make the group instead of the individual the unit under Health Insurance, thereby requiring the association of general practitioners with the various specialists?
(b) If so, should the group of necessity be attached to a hospital open to Health Insurance members?
(c) Could the specialists in one group be attached to other groups as well?
(d) Would it be possible for the State Insurance Fund to pay a lump sum to the group, allowing the doctors to arrange for division, or should the method and amount of remuneration be determined by the State commission?

4. (a) Should the amount of work to be done under Health Insurance by any one doctor be limited?
(b) Should the number of persons on the panel of any one doctor be limited to a certain fixed number?
(c) Should the number be variable, in the discretion of the commission, or should it be variable merely as between rural and urban districts?
(d) Should the question of the maximum number of patients be left in each instance to a supervisory body or to the Insurance Commission?

5. (a) Should there be a medical advisor in the different districts of the State (assuming that there is to be free choice of physician), who has real disciplinary supervisory powers?
(b) Should this advisor be merely a referee, with power and duty of deciding insured person's eligibility to sickness benefits and having no powers or duty or assisting in diagnosis and treatment?
(c) Should this advisor have such powers as referee plus right and duty of acting as consultant when called in either by patient or physician, his opinion to be accepted or rejected, according to wish of practitioner in charge, as is now customary with consultants?

6. (a) Should any practitioner be permitted to take into a Health Insurance Hospital (i. e., hospital contracting to take Health Insurance patients), operate, etc., without any supervision from hospital head?
(b) Should any restriction be made as to performance of capital operation? If so, what?
(c) Would it be practical to plan two types of hospital: (1) a diagnosis center with its attendant staff of specialists to which all cases of unusual difficulty would be referred and in which the general practitioner must follow the study of patient's case; (2) a general hospital where the doctor can take his patient just as now and at the same time find at this hospital a staff of specialists to assist as consultants, if desired?
(d) Should the State build and equip diagnosis centers where all the specialties would be found (also laboratories, X-Ray facilities, etc.), at the disposal of the general practitioner?

THE VENEREAL SITUATION AMONG THE FORCES AT WAR.

By JOHN C. SPENCER, M. D., San Francisco.

It is the consensus of authoritative opinion that venereal diseases are responsible for more disabled and inefficient fighting men than all other diseases combined. This statement is readily confirmed by reference to Governmental reports from the military authorities of the principal warring nations.

As a basis of computation for an estimate of the ravages upon human life and health, no better testimony is available than that presented in the Lettsomian oration by Sir William Osler.[1] His figures are based on the English experience:

"In 1915, while nine soldiers died every hour, during the same period twelve babies died to the scandal of the country. . . . The gonococcus is the greatest known preventer of life. . . . A conservative estimate of the women sterile from a gonorrheal infection is 50%. From the same cause 30 to 40% of human beings are rendered congenitally blind. Add to these the chronic pelvic mischief and the unhappiness of sterile marriages . . . and the gonococcus is the king among germs. . . . In 1915 syphilis was the cause of 20,000 still-births; between 15,000 to 20,000 died from the same cause during the first year of their life. . . . Out of 562,000 deaths from all causes 10,000 were from syphilis of the nervous system, and 10,000 from syphilis of the vascular system. The grand total of deaths from this cause amounted to 60,000. . . . The last obtainable figures as to the percentage of venereal diseases in the British army showed syphilis 21,000; gonorrhea, 71,000; and chancroid, 6000."

In summing up, he declares that the campaign against venereal disease, to be successful, must prepare the people, first, by educational methods; second, by compulsory treatment.

For the French army the only available figures showing the relative prevalence are from Gaucher.[2] He states that "in the first six months of the war syphilis existed in the ratio of 1–6 of the others, and in the first sixteen months amounted to 33%. About 20% of all venereal disease was among the married men. . . . About 50% of all prostitutes were diseased. . . . During the following eight months, the incidence was increased still further by about 50%, creating the assumption

* Read before the Urological Section of the San Francisco County Medical Society, October 30, 1917.

1. Osler, Sir William: Brit. Med. Jour., May 26, 1917.
2. Gaucher and Brizard: Ann. de Mal. Veneriennes, Vol. 11, No. 129, 1916.
(Ibid.) Jour. Amer. Med. Assoc., Feb. 3, 1917, p. 384.

that there must have been many cases unrecognized originally, thus proving the necessity of more thorough instruction among students and physicians in diagnosis." The Lancet [3] quotes Von Töply at some length as to the conditions in the German army as follows: ". . . But venereal disease remains a greater drain on the fighting forces than any other infectious disease, and the problems associated with it are still far from being solved. . . . In the war of 1870, 9% of the total morbidity of the Geman army was due to venereal disease. This was very low, as from 7-31% is the usual level in all wars. . . . Were an army to fight one battle every year, the casualties from dead and wounded would barely be as heavy as from venereal diseases. . . . The incidence of venereal disease is directly proportional to the duration of any war. . . . War brings in its wake a code of morals so utterly at variance with the accepted standard of peace, that men posing as models of probity at home, run amuck when constrained only by so-called military law." According to German sources of information it is particularly in hostile territory that the licentiousness of the soldiers is given freest rein.

It is practically impossible to get authentic figures as to the prevalence of venereal diseases in foreign countries up to as late as the present mid-year. The surgeon general of Canada courteously but frankly declines to supply any data during the present war.

America.—From the records of the United States Public Health Service, official figures for the fiscal year 1916-1917 give the incidence of venereal diseases as follows: For 1916, syphilis, 6.9%; gonorrhea, 9.8%; chancroid, 3.6%. For 1917, syphilis, 9.8%; gonorrhea, 11%; chancroid. 3.15%. From the United States Navy for 1916 the daily average percentage of those infected with syphilis was 26%; with gonorrhea, 28%; with chancroid, 1%. From the side of efficiency it is interesting to note that syphilis was responsible for a total of 67,000 sick days (i. e., days on which the individual was incapacitated for duty); gonorrhea for 70,949 days, and chancroid, for 27,221 days. These are striking figures on the interference with effective service charged to venereal diseases alone.

In the annual report of the Surgeon General of the United States Army, it is reported that "venereal diseases still continue to constitute in the army of the United States, as in those of other countries, a very serious factor against military efficiency; just as in civilian life these diseases occupy a similar position in their relation to the welfare of the community and state. . . . For 1915 a ratio of 4.78 to 1000 was constantly sick from venereal diseases." This is relatively a low percentage as compared to that existing before 1910, but observe again the figures regarding efficiency. A grand total of 162,577 days was the toll of non-service from enlisted men rendered ineffective from venereal diseases.

Back of all these figures lie the ever present sources of contamination and infection afforded by the civilian communities contiguous to the location of the troops. It is a patent fact that when soldiers are actively engaged in battle or otherwise in duties incidental to war, or in the case of sailors, at sea, the danger of infection is practically nil. When, however, the men have idle time on their hands, with few or no opportunities for wholesome diversion, the majority ask for and receive leave for a longer or shorter period. Those so inclined, restraints being removed, either get more or less under the influence of alcohol, and seek the company of prostitutes, or seek them directly without the alcoholic preliminaries. Among the Austro-German troops, the reserves, known as the Landsturm, composed of older and in great part married men stationed at some fixed point in captured enemy territory, accustomed as they have been to intra-marital sex-relations pro re nata, the ordinary social restraints being removed, indulge extra-maritally, and form a high percentage of those infected with venereal disease. Quoting Blaschko again: "The percentage of venereal disease in the German army is not only lower than that in any of the other armies, but lower than that in the corresponding civilian population, by reason of the severe discipline and lower wages prevailing in the army."

Contributing Causes.—Some of the chief contributing causes are faulty moral education, and squalid physical surroundings, involving overcrowding, especially in cities. With these go wage-conditions, depending partly on local economic conditions, but to a large extent upon national conditions involved in national policies regarding supply and demand of products of all kinds. These and other factors increasing the cost of living, tend to decrease educational opportunities for the poorer classes. The young are thrown out into the world to begin the struggle for existence before there is time to lay the foundation for their future moral character. With little or no moral education at home, the sex side of their natures tends to develop precociously through the example of their vicious environment. Girls are attracted by the glamor of better clothing and entertainment. Whatever slight inherent moral force they possess is usually blunted or destroyed by alcohol. With slight or absent parental oversight they follow the lines of least resistance and drift into clandestine or open prostitution. Blaschko states that among the civilian population of Germany venereal disease is very common among the working classes, although the majority do not consort with prostitutes, but with girls of their own class. The highest percentage is found among the higher classes. In the working class, continence is exceedingly rare and among the upper classes negligible.

One great primal cause is at the bottom of this form of social dereliction. It is inherent moral force which makes and keeps the individual continent. Man from the highest to the lowest orders, demands chastity of woman. Unfortunately for the human race he does not always demand it for himself.

Exner [4] has made a most illuminating study of

3. Lancet, 1916, Vol. 2, p. 567.

4. Exner, M. J.: Social Hygiene, Vol. 3, No. 2.

the situation as regards venereal diseases affecting our own troops recently stationed on the Mexican border and in Mexico. He spent seven weeks studying the conditions existing in seven different camps. He states that "a factor which greatly enhances the moral strain upon the soldier is the process of being leveled down to the lower element. . . . The terrific down-pull of the military camp, as of all similar male group-life canot easily be exaggerated. . . . Loneliness contributes to the cause of immorality in the soldier. . . . While many officers have not done what they should have done and had the authority to do to minimize the evil, the blame for the bad conditions must rest much more largely on the civil authorities of the communities in or near which troops are located. . . . The communities, so far as I know, without exception not only failed to co-operate adequately with the military authorities in suppressing prostitution or making it inaccessible to the soldiers, but many of them vigorously opposed such measures on the ground that it would hurt business, or for political reasons. . . . At one camp with 50,000 men near a large city prostitution was carried on extensively without restriction beyond the usual 'regulation!' The old notorious segregated district was in full operation and in another part of the city an extensive new 'crib-system' had been built. In but few cities in the country could anything so bad have been found. Conversation with some of these women revealed the fact that on an average 'good' night they served about fifty men. Some women served more. . . . One house inhabited by Italian women was said to cater to the officers. . . . The chief medical officer of one of the divisions reported that a certain prostitute consulted one of his civilian colleagues and was found to be in the active stage of syphilis. She stated that during the preceding forty-eight hours she had served 120 men. . . . In Mexico proper at each of the two points where the main bodies of the troops were located, a prostitution-district was maintained within the lines of the camp and supervised by military officers. . . . In these instances prostitution was deliberately provided for the men by the officers upon the assumption that it was necessary for the contentment or well-being of the men. . . . One cavalry officer of high rank attempted to justify the situation thus: 'If prostitution were not provided, these men would disobey orders, go to the Mexican village and get mixed up with the women and thereby possibly bring on war.' He failed to see that to guard against a possible breach of discipline on the part of the lowest element, which he admitted, constituted but a small proportion of the troops, he would deliberately stimulate a process of leveling down the whole body of the troops to this low element and increase the evil many fold. . . . In this group of seven camps one stands out pre-eminently. It was situated near two small towns. Here, prostitution and saloons sought to establish themselves. The commanding officer suppressed both with an iron hand and never relaxed his vigilance. As soon as sources of prostitution or sale of liquor could be located, although not technically possessed of the authority, he assumed it, and got rid of them on the ground of military efficiency. According to the arguments of many of these officers, this commanding officer's acts should have been followed by extreme discontent, a clamoring for prostitutional facilities, revolt and mutiny. The facts were, that no more contented, more orderly, better disciplined, better trained, more efficient or more loyal body of troops could be found anywhere on the border. . . . These men were proud of the moral reputation of their regiment and this in itself was a great restraining influence. This . . . is sufficient to utterly refute the contention of a large body of army officers that sexual indulgence is necessary for the contentment and well-being of the men."

Prophylaxis.—The U. S. Army, Navy and Public Health Service enforce with great rigor a regulation that every enlisted man who has had sexual relations with a strange woman must report the fact to his medical officer within six hours and receive prophylactic treatment. If a man develops a venereal disease and the records show that he has failed to report for prophylactic treatment, he is placed under arrest, his pay is stopped and he is deprived of numerous other privileges. To quote Exner again: "By far the largest proportion of venereal disease is contracted in the mobilization camps before prophylaxis is applied. . . . With rare exceptions army officers, both high and low, are unfamiliar with modern studies of prostitution such as have been made by the Bureau of Social Hygiene, and with modern methods of dealing with it."

Germany.—In 1915 Von Hindenburg issued an order threatening imprisonment of from two to twelve months upon any woman who cohabited with a soldier knowing herself to be infected with a venereal disease. By way of collateral prophylaxis in Brussels, the German government has inaugurated special institutions for the entertainment of 4000 railroad employes there. The soldiers are not allowed to be billetted in private families. On the march they are not quartered in or near densely populated districts. When towns are unavoidable, leave is greatly restricted. An educational campaign is being conducted with great thoroughness. But a whole sheaf of printed matter has not proven as effective, as a demonstration in corpore vili of a severe case of venereal disease. Quacks have been stamped out, and their advertisements suppressed. Penalties for concealment have been found to be most conducive to early diagnosis and treatment.

Blaschko regards the benefits from inspection of prostitutes as illusory even when made daily. . . . He favors closing all brothels during the period of the war as tending to remove a stimulus to immorality. Neisser and Blaschko agree that moral regeneration of a nation is not practical politics and that every effort shall be concentrated on making extra-marital relations as harmless as possible. The decline of all forms of venereal disease in the German army and navy is attributed to a strict phophylactic ritual with severe penalties for failure to observe the same. Under the stress

of the war the German military authorities have temporarily placed the esthetic side of the treatment of venereal disease in the background and hold, that their suppression at any cost must be the first consideration. In this connection it may be remarked that Neisser in 1915, in addressing Die Deutsche Gesellschaft Zur Bekaempfung Der Geschlechtskrankheiten, stated that were society to dissociate itself from the teachings of individual prophylaxis, its bankruptcy would be inevitable.

Whereas the law still exists in Germany forbidding the use of the means of contraception, the military authorities not only countenance but recommend their use as a means of keeping down the percentage of venereal disease. The decline in birth-rate from their use is found to be more than offset by the reduction of the death-rate from venereal disease. The decline in birth-rate from gonorrhea in Germany over a given period is estimated to be 200,000, and 70,000 from syphilis. Owing to the scarcity of rubber, condoms are not available, therefore a 33% calomel ointment and a 10% protargol jelly are used. Owing to the great ignorance as to diagnosis and proper methods of treatment on the part of civilian physicians, the German military authorities have begun active propaganda directed toward the education of the medical profession.

Post-Bellum Prophylaxis.—Neisser, Kraepelin, et. al., recommend that, in order to avoid the danger from possibly venereally diseased men returning to civilian life, every staff and non-commissioned officer and man, before discharge, be subjected to a Wassermann test. Blaschko recommends: (1) The examination only of those definitely known to have been diseased; (2) that every case of venereal disease among soldiers shall be retained under military control until cured; (3) the transfer of all other cases of venereal infection to the national insurance societies for further observation and treatment; (4) that drastic reforms for the control of prostitution be instituted. Tullidge[5] says that the French, German and Austro-Hungarian troops on the home-zone and at the front are acquiring venereal diseases at a rate far exceeding that in any previous war, especially in Austro-Hungary. By way of prophylaxis he states that educational methods are very essential but that some effectual preventive should be at the disposal of every individual. This plan may be offensive on esthetic grounds, but takes precedence over other methods of prophylaxis in maintaining the men at the highest level of fighting efficiency.

Malingering.—A curious sidelight in this connection is the deliberate infection of themselves from the secretions of comrades suffering from a venereal disease, by individuals anxious to escape further military duty.

Treatment.—The methods of treatment employed do not differ essentially from those used in this country. It is interesting to note that one German military officer has discovered that the use of the X-ray filtered through a 0.5 mm. aluminum screen will cause chancroidal buboes to subside and disappear. In a questionnaire sent out by Gaucher to all military commands regarding the relative efficiency of the various arsenical preparations, Neosalvarsan, Novarsenobenzol, Salvarsan with Arsenobenzol, Galyl and Luargol, he gathered the following data: All showed remarkable safety in skilled hands. Neosalvarsan gave very good results; Novarsenobenzol was preferred to Neosalvarsan and sometimes acted better; salvarsan with Arsenobenzol was found to be very active, and was used only when Novarsenobenzol was not obtainable; Galyl was very active but variable in quality; Luargol was extremely active, being sometimes followed by phlebitis because of its high sodium content. Out of 95,000 injections no fatalities are reported.

English Army.—May[6] presents a comprehensive syllabus approved by the War Secretary of which the chief points are early diagnosis and efficient treatment; that prevention of disease may be guaranteed only through avoidance of possible infection; he denounces the idea that continence is ever harmful, or that incontinence is essential to manhood; he lays stress on the contributory effects of alcohol in diminishing self-control, and the importance of each man keeping fit for army efficiency; that instruction in artificial prophylaxis implies tacit encouragement of incontinence; lectures should be given by women social workers to women; opportunities for social recreation should be provided; the use of alcohol be restricted; loose women should be controlled to prevent migration from camp to camp.

Report of British Royal Commission.[7]—As an essential feature in the campaign against venereal diseases bearing directly on their possible spread among the civilian population, and eo ipso among the troops, the British Government in 1913 appointed a commission to investigate the entire subject.[7] This report was submitted in 1916. It states, that registration and medical examination of prostitutes is inefficient as a sanitary measure; that compulsory notification should not be enforced for the present, until the public is more familiar with the plan; that there should be inculcation of the idea of continence; that there should be a widespread educational campaign; that syphilis is best combated by energetic treatment, every facility being afforded for early diagnosis and continuous treatment; that free treatment shall be afforded to every one applying—the cost of this is to be divided, the general government paying 75% and the local government 25%; that there shall be compulsory treatment for all delinquents; that great harm is done by attempts at treatment on the part of incompetent or unqualified physicians; quacks, ignorant practitioners of special sects and by counter prescribing; that all quack advertisements should be suppressed.

West Australia and Tasmania.—West Australia has adopted a drastic law requiring compulsory notification and treatment, the patient's privacy being protected. Report of a given infection must

5. Tullidge: Military Surgeon, 1916, Vol. 39, pp. 49-53.

6. May: Practitioner, 1916, p. 482.

7. Jour. Amer. Med. Assoc., Feb. 3, 1917, p. 375.

be made within three days of its discovery and the patient remain under treatment until cured. Failure to obey this law is punishable by heavy fine and imprisonment. All court proceedings are absolutely secret. The two essentials upon which greatest stress is laid are: (1) Recognition of the importance of universal prompt treatment as the most efficient measure of control; (2) The enforcement of treatment. Tasmania has enacted similar laws, with the addition that persons under sentence are afforded treatment, and that hospitals refusing treatment or care of venereal cases shall be deprived of part or all of their government subsidies.

French Army.—Carle,[8] giving a summary of prophylactic measures in the French Army, divides them into individual, general, medical, and administrative. Under the first is the use of condoms, injections and ointments; second, monthly or bimonthly inspection, and inspection of those about to leave on furlough, and those just returned from leave; third, prompt and vigorous treatment of those infected. A government order of 1916 requires hospitalization of syphilitic soldiers during the active stage, with absolute internment; fourth, compulsory notification of infection and location of the infecting woman; punishment for false statements as to the status of the disease, and regulation of establishments frequented by prostitutes.

U. S. Army.—Col. Keefer,[9] writing on "The Venereal Peril to Our Army," says: "Venereal infections . . . constitute the most important health problem with which we have to deal." Prof. Kellogg of Stanford University says: "Venereal diseases are a scourge especially fostered by militarism." The Surgeon-General's office has already worked out a plan for co-ordinating the activities available for the control of venereal diseases, having as an advisory committee Drs. Wm. A. Pusey, Francis Hagner, Grover S. Wende, S. Pollitzer and H. H. Morton. The importance of the problem has been thoroughly appreciated and there need be no anxiety in this regard as it relates to our army. The program necessitates the cooperation of the civilian authorities and especially civilian physicians. Every case of venereal disease occurring in the army will be found to depend upon a similar case in the civilian population. Herein lies the opportunity of the civilian physician to "do his bit" effectively. The important points are: That the civilian physician should satisfy himself, that he is thoroughly capable of making an early diagnosis of these cases according to modern diagnostic methods, and stand ready to co-operate with federal and state authorities in efforts to control this scourge. County societies in counties where cantonments exist, should be especially alive to their responsibilities and opportunities. A complete syllabus (ibid.) has been issued by the Surgeon-General's office, of measures for combatting these diseases.

The California State Board of Health in August, 1917, established a Military Welfare Bureau for the care and prevention of venereal diseases in and near military camps in California, for which Governor Stephens has appropriated $60,000.

Lyster[10] shows an interesting table of the incidence of venereal diseases in the U. S. Army covering a period from 1888 to 1915. From 1888 to 1898 our army was still confined to the American continent. There was no regular inspection for venereal diseases as is now done fortnightly. Ready and exact diagnosis was unavailable. There was no controlled propaganda to reduce venereal diseases. Under these conditions the average rate of admissions was 78 to the 1000. The Spanish war with its new conditions, with our troops in foreign countries, the rate of admission almost doubled. From 1898 to 1908 a systematic campaign was gradually developed, with a marked falling off in the number of admissions. From 1909 to 1911 the principles of preventive medicine began to be applied, the Wassermann test and the vaccine therapy of gonorrhea. In 1912 the fortnightly inspection for venereal diseases was ordered. From this time on the rate of admissions fell off nearly 40 points in two years, due to *inspection* and *individual prophylaxis* supplemented by the order concerning the stoppage of pay, etc. He regards the education of the new medical officers as the *first* condition to success; the education of the line-officers as the *second condition;* the education of the men as to individual prophylaxis after exposure, the *third* condition of success. The efficiency of the army depends on the health of the men. The greatest enemy to its health is venereal disease.

Senator Weeks[11] introduced a bill in September, 1917, providing for fine and imprisonment of any one keeping a house of prostitution to which any one known to be a member of the military or naval forces is admitted, and also prohibiting, by fine or imprisonment, any one convicted of disorderly conduct or any sexual offense, from loitering or soliciting around military camps.

In February, 1915, the Secretary of the Navy issued a circular letter to all commanding officers of the Navy, calling their attention "to the subject of the prevalence of venereal diseases in the Navy," and striving especially to arouse renewed interest and activity in educational prophylaxis. Nearly every medical report that comes in, states in substance that venereal disease continues to give a far greater damage rate than any other factor. In the preceding statistical year it caused 141,378 sick days. For the same period Argyrol to the cost of $10,800 was used, and Protargol to the cost of $8,929. A single invoice of Salvarsan cost $17,000. The total expense for these purposes would probably show that the larger part of the appropriation for the department had been so used. It was his aim to endeavor to arouse a deeper interest among officers and men. In this educational campaign against the social evil, feeling that in this manner we have the only hopeful solution of the problem compatible with morality and the civilian and military laws. The Secretary is to be most

8. Carle: Ann. de Mal. Vener., 1916, Vol. 7, p. 536.
9. Jour. Amer. Med. Assoc., Vol. 69, Nos. 8 and 9.
10. Jour. Amer. Med. Assoc., Vol. 69, No. 16, p. 1257.
11. Jour. Amer. Med. Assoc., Vol. 69, No. 15, p. 1271.
12. Navy Dep't, Washington, D. C., ref. to No. 27142-10.

highly commended for the moral courage shown in his efforts to handle this problem on the highest moral grounds and laying the greatest stress upon this aspect of the situation.

Conclusions.

1. The military authorities of the world are agreed as to the devastating effects of venereal disease upon the enlisted men of the army and navy.

2. Likewise they are agreed that fighting efficiency is the one requisite demanded of the troops.

3. The overwhelming majority is agreed that prompt diagnosis and early and persistent treatment are the most vitally essential factors in reducing the amount of venereal disease and eo ipso keeping the greatest number of men efficient for fighting.

4. All authorities are agreed on the fallaciousness of any system of segregation, regulation and inspection of prostitutes, under existing conditions, excepting those ruling in West Australia and Tasmania. Unless these obsolete and inefficient methods are capable of being carried out under a strict lock and key quarantine, their futility is absolute. Even under a fairly frequent system of inspection, there can be no escape from the great probability of an infection between inspections. The most fallible part of this archaic system is that of confining the inspection to one sex.

5. The opinion is also practically unanimous, that until the whole civilized world is united on some method of prophylaxis more effective than the present moral and educational methods, in view of the proneness of the men in service, unless rigidly controlled by the military authorities to indulge in impure sexual relations, some form of individual prophylaxis must be provided for them. Its use must be made compulsory, and the failure to use it penalized.

In view of the tacit campaign of silence in the daily press, it is a refreshing sign that the daily "Evening Post" of New York City has boldly established the precedent of setting aside a certain space in its columns weekly, for a frank treatment of the subject of social hygiene. Per contra, a recent striking address delivered by Secretary Daniels before the Clinical Congress of the Surgeons of North America, was reported in but one of the local dailies.

What has been said in the body of this paper, is not to be interpreted as minimizing in the slightest degree the high value of educational and moral prophylaxis in our efforts to combat the ravages of venereal disease. The day has passed when their menace may be ignored or made light of. If the world aims to attain its highest efficiency, not in war alone, but in every phase of human activities, a widespread and concerted educational and moral campaign must be launched, supported by the most rational methods of prophylaxis, if the mental, moral and physical vigor of the nations are to be preserved, and posterity have the assurance of the heritage of a body uncontaminated by these preventable diseases.

Original Articles

APPENDICITIS IN CHILDHOOD—STUDY OF ONE HUNDRED CASES.

By LANGLEY PORTER, M. D., San Francisco.

Appendicitis is a condition far from rare in childhood, but common as it is, its timely recognition is one of the most difficult tasks presented to the medical man for solution. The classical signs which in adult patients render the diagnosis relatively easy, fail or are obscured when the attack occurs in early life. Fever, vomiting, constipation and abdominal pain are all frequent events during the child's first years, events which may be indices of either trivial or tragical pathological disturbances. Leucocytosis also, may mean much or little at this period as white cell counts are increased very materially under very slight provocation and fluctuations in the counts are positive and frequent. The difficulty in eliciting dependable replies from children minimizes the value of subjective symptoms, the very group of symptoms which is most weighty in diagnostic consideration when we are dealing with adult patients. Again, children are readily frightened and cry easily and persistently while under examination, thus sometimes masking slight degrees of abdominal muscle rigidity and at others raising a doubt about the state of affairs in the abdomen, underlying muscles being made rigid by breath holding or struggling. The idea so prevalent among parents that pain in the belly is the normal lot of children also rises up to plague the medical man; many a little one is brought to the physician with a ruptured appendix because an obvious abdominal pain has been ignored.

The frequency of appendicitis in early childhood is variously reported by different authors. Men who have had large series of cases to operate on report different experiences in this regard, probably due to the source of material. The highest figures are those of Klopton of St. Louis, who, reporting on appendicitis in childhood, found that 9% occurred in children less than five years of age, 54% between five and ten years and 37% between ten and fifteen years. This stands in marked contrast to the figures of our one hundred cases, which are:

9 in 2nd year		
13 in 3rd year		
3 in 4th year	25 cases in 1st to 5th year, or 25%	
7 in 5th year		
2 in 6th year		
7 in 7th year		
6 in 8th year	39 cases in 5th to 10th year, or 39%	
10 in 9th year		
14 in 10th year		
	36 cases in 10th to 15th year, or 36%	

Deaver in five hundred cases found 8% occurring in the first five years, while Churchman and McCosh in their series had very low figures for children less than five years of age, the latter 1 7/10% and the former less than 1%. In Ritterhaus' statistics of ninety-eight cases, three occurred within the first five years, twenty-seven cases between five and ten years, and sixty-eight between ten and fifteen years. All these statistics

emphasize the fact that there is a heavier incidence after the tenth year than before.

In our series it is rather odd and interesting to note the large proportion of children who were in their third year. This bears out a lay idea prevalent in San Francisco that the third year is one in which appendicitis is very frequent; why it should be so, we cannot explain.

As the older children present a clinical picture of appendicitis in no way different from that which occurs in adult life, it is of little importance for the purpose of this paper to study in detail those cases that occurred in adolescence or later childhood.

In our series the sex incidence was about equal, forty-eight males and fifty-two females, which is the general experience.

Pain referred to the right lower quadrant of the abdomen was present in almost every instance and was absent but twice in our series. These exceptions will be discussed in greater detail later. General abdominal pain was present in fifty-seven instances (57%); sometimes this pain preceded and sometimes came after the pain referred to the right side. Pain in other places in the abdomen occurred in nineteen cases; these pains had three favorite sites:

First, the epigastrium. When this occurred it was the first sign of trouble and it was always mistaken for the ordinary stomach ache of little children.

Next the bladder region; pain and tenderness here is recorded in eight (8%) of the cases. Third, the right leg, where pain is also recorded eight times, it was accompanied by characteristic tenderness on movement of the limb. Pain in the left lower quadrant of the abdomen, localized there without pain or tenderness elsewhere, occurred four times, once with pain in the left leg. These peculiarities will also be discussed more fully.

Vomiting was absent in seventeen cases (17%).

Diarrhoea, which has been mentioned by many writers as a complication and to which Gray and Mitchell attribute grave prognostic significance, occurred but once in our series; the fact that there were only four fatal cases in this series may be evidence supporting their contention.

Chills were manifest in fifteen cases (15%).

The temperature ranged from normal to 104°, the pulse from eighty to one hundred and sixty; the highest recorded respirations were seventy and the lowest twenty-two. In eighteen cases the respiratory rate did not exceed thirty and in only three did it exceed forty and only once reached the very high figure of seventy. This shows the importance of considering the respiratory rate in differential diagnosis from those cases of diaphragmatic pleurisy which are often so misleading.

Blood counts were of very little value in helping arrive at a diagnosis. In fourteen instances the white count was greater than 25,000; fifteen times it was 15,000 or less; the lowest count was 8,000 which occurred three times and the remainder of the forty-two counts, recorded in the one hundred histories, were between 15,000 and 25,000. On the whole, it is safe to say that an increased white count is a valuable confirmatory evidence, but that an absence of increase in the white cells does not exclude an acute appendicitis, nor an acute exacerbation of a chronic inflammation of the appendix. The same may be said of a relative increase of the polymorphonuclear cells. The counts of these ranged in our cases from 90% down to 45%.

The number of cases in which the appendix was ruptured before the child was operated on, due in some instances to neglect on the part of parents and in some instances to an error in diagnosis and in others to a temporizing treatment, is striking. There were thirty-seven instances in which this accident had occurred and in more than two-thirds of these a general peritonitis had set in; in the remainder these patients had been fortunate and had developed a localized abscess. Of the twenty-five patients, aged five years or less, only four (16%) escaped rupture.

Recently a great deal of stress has been laid upon a relation of tonsillitis and sore throats to appendicitis. With this point in view, we have inquired carefully into the previous history of these patients. We were able to elicit a history in sixty cases. Of these, recurrent tonsillitis had occurred in fifteen instances. One case which was striking in the extreme in the same sequence, has been previously reported. The child was operated upon on a Monday for chronic enlargement and infection of tonsils and two days later developed a characteristic attack of abdominal pain with vomiting and tenderness. Pain was extreme but the cause was unrecognized. Two days later when he was seen in consultation it was obvious that he had general peritonitis and on operation, his appendix was gangrenous and had perforated. Free drainage was followed by uninterrupted recovery. It is striking that in all the cases in this series which had perforated and in which there was a peritonitis, recovery followed when free drainage was made at a sufficiently early date; in most of these the appendix was also removed.

Another striking point about the peritonitis following perforation is that immediately after the perforation the child seems very much better, so much that in two instances in which I had been summoned, the summons was withdrawn because of the child's improvement. This improvement, of course is soon followed by an exaggeration of the symptoms, especially of the vomiting and constipation or diarrhoea. All symptoms diminish, however, after perforation. The pulse aids us to reach a clear decision, because almost invariably we encounter an increased rate of heart beat, and in almost every case in which we have had signs of appendicitis that have disappeared and have been followed by mounting pulse rate, it was proved that perforation had occurred. However, one must remember that the pulse rate is variable and increases under excitement, fever and other stimuli in early childhood.

Much stress has also been laid upon urinary symptoms, pain, distress, burning, frequency, as diagnostic aids in cases of appendicitis. In this series, the symptom was detailed in the history eleven

times. The histories were incomplete in this detail in thirty-eight instances.

As has been stated, abdominal pain was present in all of our cases, and in most of them at one time or another it was present in the right lower quadrant of the abdomen although it was frequently referred to the region about the umbilicus, and rarely to other areas. The histories show that more frequently younger rather than older children were attacked with pain in other regions than the right lower quadrant. Two instances occurred in which there was no pain on the right side at any time in the history of the case, but pain, tenderness and muscular rigidity were well marked in the left lower quadrant. In each of these cases there was a very long appendix which reached across the abdomen and was adherent by its tip to the left of the median line. In both instances rupture occurred at the tip and was followed by an attempt at localization of the abscess which was not complete. Both children died from generalized peritonitis and, curiously, each was in its third year. In both of these cases the diagnosis was deferred in spite of vomiting, pain, constipation, muscular rigidity and tenderness, because the right side was absolutely free from any of the classical signs of an appendicitis.

In another case greatest distress was caused when the child had a bowel movement or passed flatus. A rectal examination revealed a localized pelvic abscess with fluctuation in the retrocystic pouch and laparotomy proved that the child had a long appendix which extended over the brim very low into the pelvis. The viscus had perforated at its apex and formed a local abscess that sooner or later would have spontaneously opened into the gut. The consideration of such a case emphasizes the value of rectal examination whenever a doubtful abdominal condition is being dealt with; it goes without saying that the examination should never be attempted except under an anaesthetic. The palpating finger in the rectum will discover any such abscess as occurred in the case just referred to or will differentiate puzzling cases of tubercular peritonitis from suppurative appendicitis.

In one of the three-year-old cases the pain of a first attack was referred entirely to the upper right quadrant of the abdomen; the child always pointed to the same place, a spot about half way between the umbilicus and the cartilage of the ninth rib. At this first attack there was absolutely no tenderness, no muscle rigidity nor guarding and no vomiting. On the second attack some weeks later the mystery of this was cleared when operation revealed the fact that the child had a high placed caecum with the appendix lying just within the region where he had complained of his pain. It was, however, obvious that there had been no actual inflammation of the appendix during the first attack, but that the pain was due to an appendicular colic resulting from efforts to expel a well developed concretion which was discovered within the appendix. Pain at this site is of interest because it is about here that the pain and tenderness in a gall-bladder case develops, but as gall-bladder involvement is practically an unknown pathological condition in children, it is interesting to know that the appendix may give rise to such symptoms.

One little girl of five years, who had a chronic appendicitis with recurrent attacks of vomiting, complained of no pain or tenderness except when attempting to walk up or down a hill or stairway. She then was bitter in her complaint and often found it impossible to go on, so much so, that many times her father was forced to carry her; she also showed the characteristic signs of psoas involvement in that she found it painful to flex the thigh on the trunk or to allow the flexed thigh and extended leg to fall slowly toward the bed. Some confusion might arise in instances like this where the chief distress was referred to the psoas muscle and an early Pott's disease might be suspected, especially as abdominal pain is one of the cardinal symptoms of this disorder. However, the absence of the other characteristics of appendicitis and the presence of the rigidity and the tenderness of the spine should make a continued confusion impossible.

When the pain is relieved by pressure over the abdomen, then we are told by Griffith that we may exclude a true acute inflammatory process in the appendix or for that matter, in any of the abdominal viscera and the probability is that we are dealing with a case of diaphragmatic pleurisy, a condition which has misled many good observers. In order to emphasize that these may be sources of confusion, it may be well to give brief histories of such cases:

F. S., age three years, was sent to the Lane Hospital with a diagnosis of appendicitis; the diagnosis was based upon the finding of intense abdominal pain, sudden in onset, vomiting and constipation. Within twenty-four hours the abdominal signs gave way and the signs of pneumonia of the left base appeared. This patient's symptoms were much less puzzling than those of M. Mc. age five years, taken ill suddenly, her only complaint being of "pain in the stomach." Her fever was 104°, pulse 140 and respirations from forty to fifty, a range often to be found in the beginning of an acute attack of appendicitis. When the child's abdomen was palpated, it is true that the upper right quadrant seemed to be more tender than the lower, but such a state of affairs may often occur in an appendicitis patient with a high placed cecum. Such developmental condition is not infrequent in patients of this child's age, as indeed is illustrated by one of the histories to be detailed later on. The most painstaking examination of the chest failed to reveal any physical sign pointing to lung involvement; dullness, rales, friction rubs, tubular breath sounds, all alike were absent. Three days after the onset of the pain, friction could be heard and soon the signs of a full blown pneumonia of the right lower lobe were apparent and at the same time the abdominal signs disappeared. In both these instances the diaphragmatic pleurisy was followed by a purulent effusion into the chest.

The surgical conditions which may be confused with appendicitis are rare in childhood. Such a case occurred in Patient A., a girl of twelve

years who was taken suddenly ill with vomiting, abdominal pain and high leukocyte count. There was muscular guarding and tenderness of the abdomen below the umbilicus, tenderness on palpation in the same area, and the temperature reached 101°. On rectal examination there was great tenderness and a large mass was found which filled the pelvis. Laparotomy showed that the child was suffering from necrotic dermoid cyst of the left ovary. The pedicle of the tumor had become twisted and on examination was found necrotic. The child made uninterrupted recovery after the operation.

Localized adenitis of the septic as well as of the tubercular type is occasionally puzzling. The frequency of abdominal tuberculosis makes the following record of interest, as the condition was mistaken by several excellent observers for acute appendicitis.

M. B., a girl five years of age, was admitted to the Lane Hospital because for one week she had been suffering from attacks of abdominal pain localized to the right lower quadrant; the pain became worse after she took food. The child was constipated and had an anorexia; there had been neither vomiting nor nausea. On examination there was tenderness and rigidity over the right iliac fossa and on deep palpation, an ill-defined mass could be made out. Under an anesthetic the same mass could be felt with ease. When the abdomen was opened at operation, this mass proved to be adherent ileum entangled with lymph glands in an acute tubercular inflammation; the appendix was perfectly normal. It is of interest to note that the white cell count offered no aid to the diagnostician; leucocytes were 20,000 with 88% polymorphonuclear cells. The temperature which ranged from 101° to 104° lent no aid in clearing the diagnosis. The child died a few weeks later from a generalization of the tuberculosis.

Even more illustrative is the case of:

D. V., a male infant, one year old. The parents stated him to have been in perfect health on August 18, 1916. On the following day a bowel movement was passed with some gas. Later on that afternoon the child was taken suddenly ill with abdominal pain and shock. He lay listless and pale and roused only to ask for water which he immediately vomited. There was incessant vomiting during the next twenty-four hours with paroxysms of pain. On physical examination, the child lay on its back with legs drawn up, the abdomen distended; there was general rigidity and guarding of muscles. Tenderness on palpation was general over the abdomen. In this case there was an increase in white blood cells and the sudden onset with pain and vomiting might have led one to the diagnosis of appendicitis, although the physical signs were definitely those of a tubercular peritonitis.

The consideration of these cases has led to digression, so to return to a consideration of pain, the predominant and revealing symptom of appendicitis, it may be well to note a few of the other causes of abdominal pain in children.

The commonest, of course, is improper food. Fortunately it is unusual to find children suffering frequently from this symptom after their second year; although when older children do suffer from it, the confusion is rendered greater by the fact that many of them also vomit. Most of these belly aches of childhood follow improper diet, especially that coarse diet which is now so much the fad, Roman meal, graham crackers, bran biscuits and fifty-seven other enormities which are fed to children with the mistaken idea that they will remedy constipation. The pain which follows the ingestion of such food is, however, very characteristic; almost always it is referred to the region of the abdomen just above the umbilicus. It is very rarely accompanied by any tenseness or tenderness of the muscles. It is not uncommon for the children, victims of such pain, to have urgent calls to stool immediately upon beginning a meal, furthermore a microscopic examination of their evacuations shows an abundance of undigested starch and a great amount of coarse waste. Nevertheless the differential diagnosis of this condition from a chronic appendicitis may be most difficult, for, as already recited, the pain of appendicitis may be referred to the pit of the stomach or high up on the right side or to the left side. Child patients with painful indigestion nearly all have a tender colon, but so may those with chronic appendicitis and it is not at all uncommon for pressure on the descending colon to cause pain at the caecum both in chronic indigestion and in chronic appendicitis.

Vomiting is next to pain the most frequent and characteristic symptom of acute appendicitis in little children. There is a well recognized clinical picture in early childhood which has come to be called "recurrent vomiting." This may be of any degree of severity, it varies in all degrees from simple easily remedied emesis to that severe form accompanied by extreme acidosis and degeneration of the liver, first described by Parks of Birmingham, and found by him to be almost always fatal. It is now a number of years since Comby pointed out that many different clinical conditions were being grouped under the name "recurrent vomiting" and he called attention to the fact that a large proportion of these recurrent vomiters were suffering from chronic appendicitis. Our more recent knowledge has shown us that the so-called acidosis of children is an accompaniment of many different infections and intoxications and the diagnosis of "acidosis" or "recurrent vomiting" is not to be accepted as final, because the presence of acid bodies and the vomiting are only symptoms. In recent years I have seen many children who have suffered with periodical attacks of vomiting and in most cases I could find an underlying cause. Five of them suffered from chronic appendicitis and are included in this series; in each of the five the recurrent vomiting cleared up and did not return after the removal of the appendix.

In passing, I would say that more than half of my cases of recurrent vomiting were cured after removal of diseased tonsils and adenoids. I believe with Sedgwick and Eustace Smith, that infected tonsils and adenoids are a very common cause of the infection or intoxication which leads to periodical vomiting. Duodenitis, most often the result of coarse food or an excessively high fat intake, is the

next commonest cause and is much more apt to lead to diagnostic confusion with appendicitis than is anything else, because of the fact that duodenitis is accompanied by attacks of abdominal pain such as we have already discussed, and because both the duodenitis and the colic may be caused by the indigestible residues of coarse food.

Rigidity of the abdominal muscles may be the most helpful of signs in arriving at a diagnosis of appendicitis, but in very young children who struggle and cry, the most expert examiner may be unable to draw a useful conclusion. In such cases it is well to remember the axiom Dr. Wilson Shiels has laid down that the unctuous palm is the greatest aid in diagnosis of abdominal condition. The examiner who attempts to get information by digging his rigid fingers into the child's abdomen will fail absolutely, while he who lays the whole hand pliant and relaxed upon the belly and bides his time, will soon find that he can learn a great deal about the underlying structures. In duodenitis or in Pott's disease or in any of the conditions before enumerated which are apt to be confusing because of abdominal pain, a proper palpation will almost invariably decide the diagnosis. Palpation sometimes is of great value when the inflamed appendix is in the retrocecal position, in which case spasm and muscle rigidity will be found not only in the right iliac fossa, but behind in the right lumbar region, as well. Percussion is rarely of much aid except when a localized abscess has formed; then a dull area over the abscess region is demonstrable, otherwise percussion gives little information.

In concluding, I will mention a few of our most interesting cases. The youngest in our series, when operated, was eighteen months of age. The child was under my care during its infancy, and during its tenth and eleventh months I watched it through several attacks which were no doubt appendicular colic. During this time the mother was very much worried and used to tell me that the child would wake up during the night, crying, apparently with much abdominal pain, so much indeed that after he was able to stand in his crib he would double himself, leaning over the side of the bed, seeking in this way to relieve his distress. If there be truth in Griffith's axiom, that pressure will only aggravate distress due to real inflammation in the abdomen, then at the time the child had not a true inflammatory appendicitis, but an appendicular colic, such as happened in the case of another child that I will speak of in a moment. The assumption that these attacks were of this nature is borne out by the family physician's notes which are as follows:

"——— male, seen August 31st, 1912. At noon of the day before had eaten six olives and tried to get more for which mother punished him and he cried. He complained of pain in his stomach and vomited. An enema was followed by good results. Vomiting continued during the day. He vomited one and one-half teaspoonful of Castoria which had been given him. Child quiet but normal. At 5 P. M. he sat up in bed and got very pale; he wanted to urinate but could not because of the pain over the bladder. Hot compresses did not relieve him. The child was limp and in shock and he was given a mustard foot bath. After the foot bath two doctors called, one of whom diagnosed a bowel obstruction and the other constipation or indigestion. Enemas and suppositories gave no results. He passed a little flatus. Child vomited but once the next morning immediately after a laxative. Seen by Dr. Bine in the afternoon, abdomen very slightly rigid, not sufficient to be of value in diagnosis, no tenderness complained of except in the region of the bladder and the left inguinal; none over the appendix. Rectal examination negative. No peristalsis heard over the abdomen. Child removed to hospital, he was examined here by consultant and child being no better on following day, operation was advised, but it was delayed. Examination under chloroform at 6 P. M. revealed nothing further than before. Operation was then urged, but delayed by the parents. Next day the abdomen was distended, bowels had not moved for three days; finally this morning there was a small liquid stool. After delay for further consultation, operation was performed at 2:30. Gangrenous appendix found, very friable, free pus in the peritoneum, drainage and recovery."

Another informing history is the one of D. H., three years of age. The child had an attack of tonsillitis accompanied by earache; five days later he was again taken ill, this time he was found to have a fever 100° F., pulse 110, no nausea nor vomiting; he was constipated, but not obstinately so. He had been waked in the night by a pain in the abdomen, this pain was referred to the umbilicus and just above; it soon passed away, but recurred at frequent intervals. During the next three days examination of the belly revealed a localized tenderness which was accompanied by some muscular rigidity localized to the upper half of the right muscle. There was absolutely no pain, tenderness, or rigidity at McBurney's point or in the right iliac fossa. There were 10,000 white cells of which 85% were polymorphonuclear. At the end of the third day the condition had entirely disappeared and the child seemed to have completely recovered and he was taken to his parents' country home to convalesce. Three weeks later he was taken ill with sudden and severe pain in the abdomen accompanied by vomiting; the pain was referred to the gall-bladder region and the upper part of the right rectus that showed slight rigidity; the fever was 103° F., the pulse 120, the respiration 39. He was brought to San Francisco at once, but the appendix ruptured before he arrived at the hospital where laparotomy was performed at once. Recovery was protracted but complete. The appendix lay well above the line of the umbilicus attached to an incompletely descended cecum, it contained an enterolith the size of a pine nut; there was a perforation directly at the end of the appendix which had caused a general peritonitis, there was no evidence of previous inflammation, neither kinking, thickening nor adhesion of the appendix. The first attack of pain was without doubt due to appendicular colic following an at-

tempt of the appendix to rid itself of the concretion. The question arises whether or not an operation should have been done at the time of the first pain. It think that it should. It seems to me fairer to the child to remove a healthy appendix than to overlook a potentially dangerous one as was done in this case.

The history of C. D., three years of age, shows that a tonsillar infection and appendicitis do occur simultaneously. On a Monday this child had his tonsils removed. The next day at about noon he was taken ill with a sharp pain just below the navel; he had intermittent attacks of sharp pain all that day with a constant dull ache in the abdomen. He had no nausea nor vomiting, neither constipation nor diarrhoea, but large amounts of flatus were passed. He was seen on the fourth day; then his abdomen was rigid and board-like, but not very tender. He had the general pain and tenderness of a post appendical peritonitis. His mother said that he had less pain during the last twenty-four hours; obviously this was due to the rupture. This case presents two important points; the relation of tonsillar infections to appendicitis; second, the absence of vomiting; a third point is the relief of pain following a rupture.

Comby's contention that some cases of "recurrent vomiting" are instances of recurrent appendicitis is borne out in the following history of K. S., aged three years. In the beginning of her second year this child was subject to attacks of "recurrent vomiting." At first there seemed to be little or no pain with these, but in each subsequent attack she would complain more, but as she located the pain on the left side the thought of an appendicitis did not occur to the parents. After she had been subject to attacks for nearly a year she was brought for examination. She said that there was a pain in her stomach, and she objected to an examination of the left lower quadrant of her abdomen, seizing the examiner's hand. There was, however, little resistance here and none at all over the right side, but deep tenderness could be elicited and a mass made out. On laparotomy this mass proved to be the very long appendix tied down by adhesions to adherent coils of gut, the tip of the appendix had perforated and the child had besides an old localized abscess a general peritonitis, which illustrates that we must not dismiss the diagnosis of appendicitis merely because we find pain and tenderness absent from the right side and present elsewhere in the abdomen.

A. R., four years of age. Patient had pyloric stenosis as an infant, from which she recovered under careful medical treatment. The present complaint began four days ago, March 6, 1915, with the development of an acute infection of the upper respiratory tract, characterized by rise in temperature, loss of appetite, sore-throat, and coryza. Forty-eight hours later complained of an ear-ache, and on examination Dr. Houston found a bulging right drum, upon which a paracentesis was done. That same night, approximately thirty-six hours before the time the patient was seen, she began to complain of pain in the abdomen and vomited. Her temperature went up to 103, and the vomiting persisted. During the whole of the following day, patient seemed acutely ill, vomiting continued at intervals and she likewise complained of indefinite pain in the abdomen. Patient was first seen thirty-six hours after onset of vomiting and abdominal pain, forty-eight hours after the beginning of her acute infection of the upper respiratory tract. The physical examination showed a very well developed, well nourished girl of four years, evidently suffering from some rather severe acute condition. There was a sero-purulent discharge from the nose, and the tongue was coated. The throat was the seat of an acute inflammation. There was a sero-purulent discharge from the right ear, the mastoid was slightly tender, particularly at the inner side. This tenderness, however, could very well be explained by the otitis media. There was no tenderness along the internal jugular vein. The cervical glands were moderately enlarged, particularly on the right side. The thorax was very well developed. Heart—Aside from a rapid heart action, incidental to an acute infection, the heart was normal. Lungs—Following a very careful examination of the lungs, no definite changes could be made out either on percussion or auscultation. Abdomen was slightly distended. Thighs were drawn up on the abdomen as if the patient were making an effort toward relaxation. Liver and spleen were not enlarged. Over the whole lower quadrant and extending to the upper quadrant were areas of definite rigidity and tenderness. No masses could be outlined. Reflexes and extremities negative. Temperature 102. Pulse 120. W. B. C. 20,000. 85% Polys. Urine negative. A differential diagnosis naturally lay between some complication from the otitis media, an extension of the inflammatory process to the lungs, a consequential pneumonia, and an acute appendicitis. The absence of signs referable to the meninges, sinuses, and the brain led one to doubt the presence of any ear complication. Careful examination of the lungs failed to show any evidence of lung inflammation. On the other hand, the abdominal findings suggested strongly the presence of a severe inflamed process in the appendix, following the acute infection in the throat and otitis media. The case was seen in consultation by Dr. Rixford, who concurred in the diagnosis. Operation was performed two hours after patient was seen, and an acute fulminating appendix was found with small recent rupture. An appendectomy was done, and the patient made an uneventful recovery.

Appendicitis is a disease that attacks many children. At this age clinical manifestations differ little from those that develop in adults, almost without exception the first sign is a sudden access of generalized pain—frequently it comes on during the night—often the child is awakened by vomiting and later follows tenderness and localized pain, usually referred to the right lower quadrant of the abdomen. The fact that pain always precedes vomiting is a valuable diagnostic aid.

A rapid progress to gangrene and perforation

is much more common before the 5th year than later in life as evidenced by the fact that 73% of our cases of five years or under perforated in contrast to 28% in children between ten and fifteen.

Diaphragmatic pleurisy is the only condition that may be really difficult to differentiate, other conditions, especially abdominal adenitis may confuse, but a comprehensive study of the case should prevent an error. The gravest danger to these little patients lies in the fact that parents are allowed to think stomach ache a normal event in children's lives and to believe that purgation is a panacea. If they could be taught that every acute abdominal pain is a potential appendicitis and that purgation may be deadly, many children would be saved who now are doomed to die.

I wish to acknowledge my indebtedness to Dr. Emmet Rixford for access to his records, more than half the cases here studied occurred in his practice; and to Dr. E. C. Fleischner and Dr. René Bine for reports of some of the unusual cases included in this report.

RAT BITE FEVER WITH REPORT OF TWO CASES.*

By F. F. GUNDRUM, M. D., Sacramento, Cal.

Rat Bite Fever is an acute contagious disease acquired through being bitten by an infected rat, and characterized by recurring paroxysms of fever, a striking blue-red rash, and a strong tendency to transitory paralysis of the lower extremities.

History. The disease has long been known in Japan by laity and profession alike. A rat bite is looked upon with dread similar to that of a dog in this country where rabies is prevalent. Ancient Japanese medical writers, that is, those whose writing antedated the introduction of Western medicine late in the 19th century, gave a considerable amount of attention to Rat Bite Fever or "Sokodu." The first description by a modern Japanese writer was that of Katsura which appeared in a system of surgery published about 1890. Miyake (1) in 1900 "was able to find no case in European literature." He accounts for the frequency of the disease in Japan by the flimsy structure of many Japanese houses, which allows rats to gnaw their way through floor or walls with little difficulty.

Distribution. Rat Bite Fever has been endemic in Japan for a great many years. It is sporadic in China and appears occasionally in other parts of the world. I have found notice of cases from England, Scotland, France, Spain, Brazil, Germany, Italy, India and the United States. The first American case report is by Wilcox in 1840. He, however, did not recognize the true nature of the disease. Since that time there have been twenty-two others recorded. I have been unable to find mention of any previous case in California. Inquiry at the University of California Hospital and the Lane Hospital brought to light no instance of this disease. I sent out a letter asking for information on Rat Bite Fever to forty physicians practicing at various localities throughout the State. None had seen it.

Transmission. The epidemiology is strictly analagous to that of rabies except that the rat is the main reservoir of the disease instead of the dog. It was for a long time thought that wandering rats only were the carriers. This is incorrect. Any rat may become infected with the disease. Only the bite of an infected rat can produce it. One or two patients have been inoculated by the bite of other animals closely associated with rats, namely, squirrels, weasels and cats.

Incubation. This period varies greatly, the shortest five days, the longest a month, average about two weeks.

Etiology. The specific organism has been the subject of considerable research and some difference of opinion. Ogata (2), in 1908, described a protozoan in the blood. This finding has not been confirmed. Proescher (3), in 1911, described numerous bacilli about the site of the bite. A streptothrix found in the blood during the febrile period has been reported by Schottmuller (19), Blake (15), Tileston (20). Tunnicliff (21), has shown that the organism of one of the bronchopneumonias affecting white rats is due to a streptothrix very similar to the one described by Schottmuller. Futaki, Takaki, Taniguchi and Osumi (23) described a spirochaete isolated from their series of cases. The course and curability with Salvarsan would seem to point toward some protozoan organism rather than a bacterial invader.

Symptoms. The bite at first heals kindly. After a varying time a sense of fullness, heat and pain is noticed, with swelling of the regional lymphatic glands and fever. There is considerable prostration with severe pain in the head, back, and especially the limbs, frequently marked weakness in the legs.

Physical Signs. Fever: A sudden rise of temperature, accompanied by a chill, apt to be quite high and run a continuous course from three to seven days, drop by crisis and remain down for from one to five days. This intermission is followed by another febrile movement similar to the first.

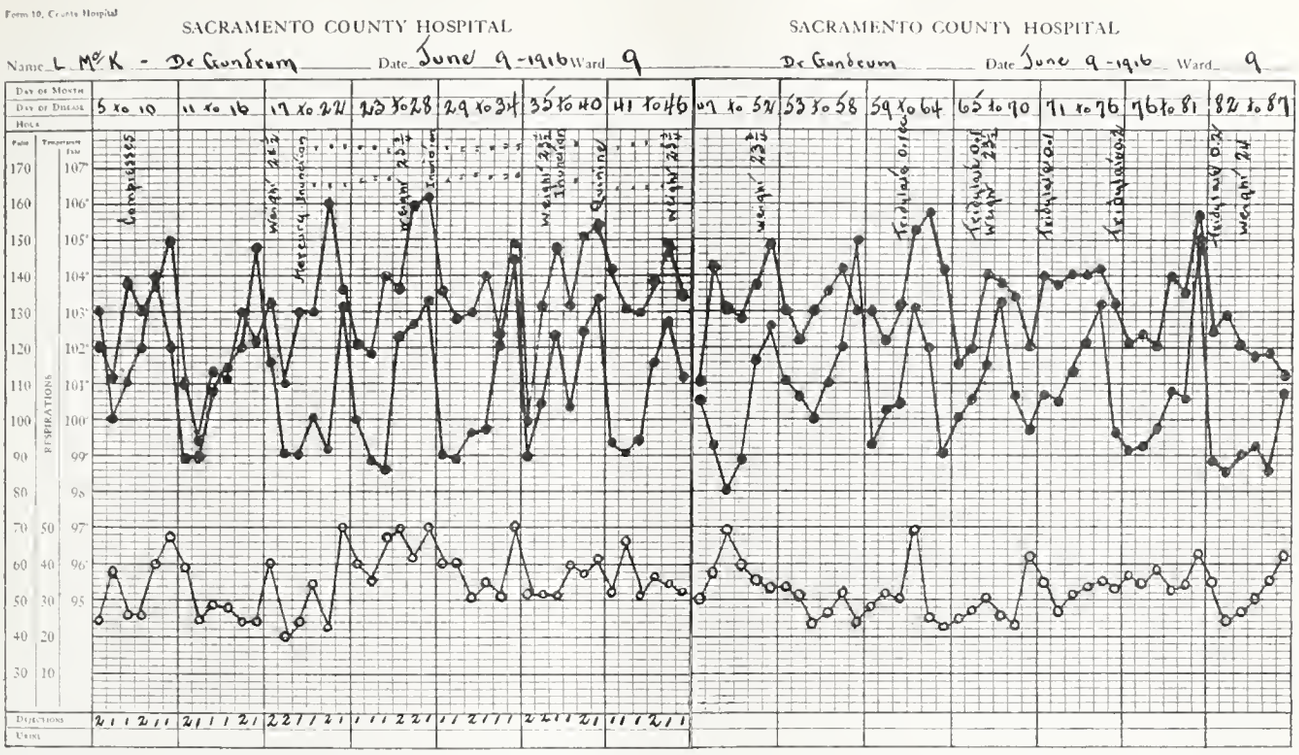
Changes at the Site of the Bite: Inflammation and bluish red discoloration followed later by pus formation, less often gangrene.

Lymphatic System: The regional glands become greatly swollen, very tender; usually do not break down.

Rash: Highly characteristic; reddish, or bluish red macular exanthem; patches varying from the size of a pea to that of a twenty-five cent piece; slightly indurated, well defined, appears on neck, face, body, extremities, palms and soles; not seen on mucous membranes. With fall of the temperature the rash fades, leaving a slight scaliness. The rash reappears with each rise of temperature.

Nervous System: May be very much involved; benumbing of the sensorium, slow speech, intense headache, delirium, often ringing in the ears and dizziness; severe muscular pains, particularly in the legs; paresis of lower extremities more or less

* Read before the Medical Society State of California, Coronado, April 18, 1917.



severe. Occasional anaesthesias and paraesthesias are noted.

Alimentary Tract: Symptoms not usually severe, may have nausea, vomiting, anorexia and coated tongue, sometimes diarrhoea.

Circulatory, Respiratory and Genito-Urinary systems are not much disturbed. Liver and spleen not enlarged. Blood changes are not characteristic, a moderate eosinophilia frequently found.

Diagnosis. An intermittent fever, bluish-red rash, severe muscular pains with weakness in back and legs when accompanied by a history of antecedent rat bite are diagnostic. The finding of a specific parasite, if confirmed, would of course be pathognomonic.

Clinical Types: Three more or less distinct clinical types are recognized. (a) Febrile with exanthem, (b) Afebrile with severe nervous symptoms, (c) Abortive.

Prognosis: The gross mortality has been about 10%.

Duration: May be very long, Surveyor (7), records a case of eight years standing. This patient was cured by a single dose of Neosalvarsan. The average course is perhaps eight weeks.

Prophylaxis: Rat destruction and immediate cauterization of rat bites would in a large measure prevent the disease.

Treatment: The ancient Japanese treatments described by Taki Rankei about 1795 consisted first of local applications made to the bite immediately and designed to destroy or withdraw the virus from the wound. They were suction, poultices of herbs, actual cautery or filling the wound with gun powder which was then exploded. There were also practiced especially by the laity measures which smacked more of magic, such as binding upon the wound a bit of raw meat which was then fed to a cat. Later under the influence of European teaching, quinine, arsenic and salicylates were used, but without very strikingly good results. In 1912 Hatta (4) reported the treatment of eight cases with salvarsan, seven recovered. Since this publication many others, particularly in Japan and India, where Dalal (8) says the disease is common, have recorded successful treatment of Sokodu with these newer arsenical compounds.

Case Reports: During June, 1916, there were admitted to the Sacramento County Hospital two patients, one of whom had a classical, the other a so-called abortive attack of Rat Bite Fever.

Case One: L. McK. Aged 14 months, admitted to the children's ward June 9th, 1916, complaining of "fever and rising under the arm."

F. H.: The family is itincrant, driving up and down the State in a wagon, subsists through picking hops, grapes, and fruit. One brother is now in the hospital with tertian malaria.

P. H.: Breast fed to seven months, then condensed milk, gruels and soups. Now eats mixed diet of the family larder. Has always had a very large abdomen and always been extremely constipated. Three weeks ago during the night a rat came into the tent in which the mother and baby were sleeping, bit the child on the left index finger and the mother on the neck. Neither bite was considered serious. The wounds healed without attention.

P. I.: Three days ago, eighteen days after the bite, the left index finger become swollen, hot, bluish-red and very painful. The patient had a chill followed by high fever. The mother thought this child also had malaria, and gave him quinine but without benefit.

P. Ex.: Fairly well developed child; weight 23½ pounds; head normal, except for a few adenoids; heart and lungs negative; abdomen very much distended, soft and upon palpation found to be occupied by a huge colon. Mother said abdomen about the same as usual. Temperature 103; pulse 160; respiration 24; left index finger greatly swollen, hot, bluish-red in color. There is a recently healed scar at the second joint. A few reddish streaks follow the lmyphatics up the arm to the axillary glands which are greatly swollen, seem discrete, rather hard and nowhere fluctuating.

Rash: Upon the body and limbs there is a striking bluish-red sharply defined, slightly elevated, macular rash, the blotches varying from three to

fifteen mm in diameter. Throat negative. Urine negative; stool negative; Blood: Hb 90%; R. B. C. 4,700,000; W. B. C. 12,000; Differential; Polymorphonuclear 70%; Mononuclear 26%; Eosinophile 4%; no plasmodia seen. Smear from site of bite stained with carbol-fuchsin showed numerous bacteria, no type predominating. Blood culture into bile broth negative. Guinea pig inoculated with fresh blood remained healthy.

Course: The patient had a continuously high temperature for six days. Then the temperature dropped to normal, where it remained for two days, after which another paroxysm of fever, rash and fretfulness ensued, lasting five days. This irregular course of alternate fever and normal temperature continued for 117 days. We were not at this time able to obtain Neosalvarsan or Salvarsan. The boy was treated first with quinine, later with mercury inunctions without any benefit. At the suggestion of Dr. Alderson who was during this period using intravenously a compound of cacodylate of Iron, Mercury and Arsenic in the Stanford Skin Clinic, we began giving the patient small intravenous doses at five day intervals. We started with 0.1 cc. and increased gradually to 0.5 cc. The patient recovered in about four months. Whether the treatment had anything to do with his recovery I am not prepared to say.

Case Two: Mother of foregoing, four weeks after being bitten had chilly sensations, fever up to 101, tenderness and swelling in the glands of the right side of the neck with a faint bluish rash. Recovered in about a week without treatment. This was considered an abortive case.

References:

1. Miyake, Miteil: a. d. Grenz. der Med. u. Chir., vol. 5, p. 231.
2. Ogata: Deutche Med. Woch., June 18, 1908, p. 1099.
3. Proescher: Internat. Clinics, 1911, vol. iv, 21st series, p. 77.
4. Hatta, H.: Munch. Med. Woch., April 16, 1912, p. 855.
5. Horder: Quarterly Jour. Med., vol. 3, 1909-10, p. 121.
6. Dick, M. D., and Rutherford, W. J.: British Med. Jour., vol. 2, 1913.
7. Surveyor, N. F.: Lancet (London), vol. 2, 1913, p. 1764.
8. Dalal, A. K.: Practitioner, London, 1914.
9. Zannini, W.: Gazetta degli Ospendali e delle Cliniche, Milan, 1914; an. xxxv, No. 75, p. 793-800.
10. Perugia and Carchidio: Riforma Medica, Naples, 31, 1915, p. 229.
11. Chagas: Brazil Medico Ann. xix, n. 28, 1915, p. 217.
12. Crohn, P. B.: Arch. Int. Med., June, 1915, p. 1014.
13. Reid and Ritchie: Edinburgh Med. Jour., 1915, p. 186.
14. Oda, Z.: Sei-I-Kwai Med. Jour., Tokyo, vol. xxiv, No. 10, p. 52, Oct. 10.
15. Blake, F. G.: Jour. of Exper. Med., Baltimore, xxiii, 1916, pp. 39-60.
16. Futaki, Takaki, Taniguchi, and Osumi, Tokyo: Jour. of Exper. Med., Baltimore, xxiii, No. 2, pp. 149-264.
17. Nakasone, K.: Sei-I-Kwai Med. Jour., Tokyo, vol. xxv, No. 1, pp. 1-4.
18. Editorial: Jour. A. M. A., October 9, 1915, p. 1285.
19. Schottmuller, H.: Dermat. Wchnschr., 58, 1914, p. 77.
20. Tileston: Jour. A. M. A., April 1, 1916, p. 995.
21. Tunnicliff: Jour. A. M. A., vol. lxvi, 21, p. 1606.
22. Editorial: Jour. A. M. A., March 18, 1916, p. 894.
23. Futaki, Takaki, Taniguchi and Osumi: Jour. of Exper. Med., vol. xxv, No. —, Jan. 1, 1917, p. 33.
24. Wilcox: Am. Jour. Med. Sc., 1840, vol. xxvi, p. 245.
25. Watson: N. Y. Med. and Surg. Jour., 1840, p. 363.
26. Gilliam: Cincinnati Lancet and Observer, 1868.
27. Packard: Phila. Med. Times, 1871-72, vol. ii, p. 408.
28. Earle: Chicago Med. Exam., 1872, p. 3.
29. Banker: Am. Pract. and News, 1886, N. S. ii, p. 70.
30. Cook: Indiana Med. Jour., Indianapolis, 1885-6, vol. iv, p. 77.

A CONSERVATIVE PHYSICIAN'S VIEW OF THE PROPOSED SOCIAL HEALTH INSURANCE SCHEMES.*

S. E. SIMMONS, M. D., Sacramento.

Conditions of society, as well as industry, are constantly changing, and the government seeks to formulate laws which are founded upon theories which seem tenable and applicable to present conditions. But the question arises in our mind, how far can the State in its legislation, advance between the extremes of Individualism and Socialism.

Two years ago we advanced along radical socialistic lines in the establishment of Industrial Accident Insurance; we now have the proposition, as outlined by Dr. Rubinow, to call upon the State to establish in addition, Social Health Insurance, which in turn is but the forerunner of other forms of State socialism which will probably follow and be applicable to insurance against non-employment, maternity insurance, old age, invalidism and death.

We all of us try to comprehend how far the law shall go or shall restrain, or compel or interfere with the freedom of the individual for ethical, economic, social or other ends. Economically we may deny that we are all socialists, and yet, if the schemes proposed by Dr. Rubinow are adopted in California, or made national in their scope, we will have a form of socialism which to me seems inapplicable in a true democracy.

The average citizen merely delegates to the State his right to legislate and make laws for him, because he finds it impractical and inconvenient for him to legislate in his individual capacity; the members of the community find that many desirable results can only be accomplished through collective agencies, but the State nevertheless remains his servant; in other words, he can if he will, and does command the State to do his bidding. Such being the case, we may presume that there is a call on the part of the people, for legislation such as is proposed by Dr. Rubinow in his Social Health Insurance schemes; but if I understand the attitude of labor along these lines, it is a matter of more

* Paper read before the Sacramento Society for Medical Improvement, October 10, 1916.

or less indifference to them, and in this State especially, they have not been particularly active in demanding this advanced legislation; in fact, some of their leaders have been quoted as being entirely opposed to these moves, on the ground that it interferes with individual liberty, and with the choice of selection of their medical attendant.

True enough, the State must often subordinate the independence of the individual to the general good, it must sometimes compel the individual to do certain things; otherwise we should not adopt the term compulsory accident insurance or compulsory health insurance.

As far as one can find in following the work of the Social Health Commission of California, we see that their investigations concern chiefly the working man and his family. By the proposed laws which they are formulating, they will seek to see that he is well clothed, well housed, well fed, and that he must live and work among satisfactory hygienic conditions, that he must have hospital, medical and surgical attendants in illness as well as after accident. It might even be conceived that they would attempt to see that he was educated and have a certain amount of mental and moral training; all these with the idea of placing him on terms of economic equality with other citizens of the State.

The Federal constitution, as well as the constitution of most of the States guarantees equality; equality of opportunity as well as political equality, which in many instances turns out to be a mockery and a delusion, chiefly for the reason that there is no such thing as equality of industry, thrift, health, activity, courage, morality, mind, physique, education or training.

We all know what has been done along these lines in England and Germany, but we make a gross error in presuming that industrial conditions are at all the same in these countries, as in California. It is stated by the Chancellor of the Exchequer, that 57% of the wage earners in the kingdom, earn less than twenty-five shillings a week; i. e. $5.00.

In Germany, more than one-fourth of the population come under the head of compulsory insurance, both accident and health, and as the limit in that country for insurance is two thousand marks ($500.00) per year as wages, it figures out that one-fourth the population is making $9.50 a week or less, vastly less, I should say. Can we compare these wage figures with conditions existing in California? Does it occur to any of us that 25% of the population in California is getting less than $5.00 a week as in England, or less than $9.50 a week as in Germany; though facts and figures are not at hand, it is very much to be doubted if such is the case.

One seldom hears of a working man in foreign countries rising out of his class, and the maxim may be given that "once a working man there, always a working man." In this country, and particularly in California, all of our great fortunes were founded by men who once were making less than a living wage.

It is not necessarily the "high cost of living" which makes existence here in California a burden to many of the population, but in the words of the late J. J. Hill, it is rather the "cost of high living," for the working man in California demands pleasures and luxuries, which the working man of foreign countries does not demand or expect; in other words, conditions and institutions that are applicable to the workers of foreign countries, do not necessarily apply in the least to the workers in this country.

Furthermore, in Germany, autocratic and monarchical as it is, the employer is not forced to pay the entire cost of insurance of the employee in case of accident, as is the case in California; for here, the latter pays the entire insurance fee, while in Germany the employer pays but one-third, and the employee pays two-thirds; this naturally tends to a spirit of thrift and economy, and makes the working man feel that he is not a subject of charity in case of accident, but is receiving benefits to which he has actually and honestly contributed.

In England, the proposition is somewhat altered, in that the employer pays three-ninths, the employee four-ninths and the State two-ninths, respectively.

One employer in Germany says, "Personally, I can not resist the feeling that the excessive provision made for the worker by legislation, tends to weaken in him, the consciousness of his personal obligation to provide independently for himself and his family; men who under other circumstances, (i. e., in the absence of similar insurance protection laws), would so act from their own sense of responsibility, unquestionably rely on the assurance that the law will provide for all the vicissitudes which may befall them, and will intervene on their behalf, under all circumstances, in case of need. In this way, the feeling of responsibility is weakened in many workers, and this I regard as the most serious defect of the laws."

Unlike the paternalism of our state government in regulating the doctor's fee, the German government has declined absolutely to consider the fixing of minimum rates of pay for medical attendants, and has left the whole matter to be regulated by the various societies and funds, such as the Leipsic Fund and the Frankfort Fund, wherein the whole question of remuneration is considered to be one for the negotiation between the parties concerned.

In relation to the proposed legislation as it affects us in California, much can be said; that these institutions as proposed by Dr. Rubinow can be put into successful operation only by the hearty co-operation of the members of the medical profession. The question before us which is the most profound and far-reaching of any which ever came before this society, is up to us from henceforth for our solution. Casting aside all ideas of benevolence, public help and utilization schemes

which this society has always stood for, let us face the problem as it confronts us, from a purely economic and social point of view. It may be argued that the Medical Profession as a whole, will receive more for this class of work than it has ever done before; that may be true, but we as individuals, are certainly destined to receive less.

In this society a little more than a year ago, requests were made for a list of those who were willing to do the State's work for a fee as stipulated, and with which you are familiar, very much less than the fees heretofore charged for the same class of work. I know of no better way than to quote some of the figures from the California Commission, to show how ridiculously low this fee was, per case tended. In 1914, there were 62,211 Industrial accidents in California necessitating medical treatment. For the medical services, (*including hospital charges*), the physicians and surgeons of California received $730,178. This averages a little over $11.50 per case, and includes, as you well know, such operations as trephining, herniotomy, plating of broken bones, and many other capital operations, *as well as the hospital fee.* Think of it, gentlemen, $11.50 a case, including hospital fees, and nearly half of these cases (47%) were alien to this State and nation.

As an argument to promote this Social Health Insurance, it is said that the sick have heretofore frequently received inadequate service from their physicians, or perchance they were refused attendants and were urged to go to a public institution. The sentiments of this society at present are no doubt due to the spirit of commercialism that has recently prevailed in its ranks, but I well remember that our fathers held it was our duty to respond to *any call,* and to refuse to visit a poor patient from whom a fee could not be expected, represented a sin which could hardly be forgiven.

Taking it for granted that there are 720,000 workers in California coming under the operation of the Accident laws, and that there were 62,211 injuries compensated for in that period (1914-1915), it makes a proportion of one worker in eleven receiving benefits.

In Germany, in 1912, of 19,082,758 workers, there were accidents compensated for to the number of 711,330, a proportion of one injured to 27 insured workers. This leaves us to surmise that the Commission in California is more liberal in making allowance for injuries, and hence it involves more expensive insurance, or else there is a greater degree of malingering, or else appliances for the safety of the worker are lacking, or else the California worker is very negligent of his own person.

Nearly three-quarters of the members of this society have signified their willingness to become members of the panel which would do this cheaper industrial work, and yet we have very good reason to believe that the State Commission wishes to concentrate the work in as few hands as possible; therefore, those who are doing this work benefit themselves as individuals alone, and the society as a whole suffers.

The Imperial Chancellor gave as an excuse when the Germans invaded Belgium and thus violated their neutrality, that they were under an act of dire necessity, and since necessity knows no law, they were compelled to act as they did.

Gentlemen, we are under the necessity of refusing to lower our standards of remuneration at the behest of the State. As an illustration of what hearty co-operation on the part of a whole organized medical society can do, I may simply quote a personal experience to illustrate what happened at the time of the insurance scandals in New York, where under the policy of retrenchment, as demanded by the Commission, the medical fee for examination was reduced from $5.00 to $3.00 by most of the big companies there operating; thus the medical man was the first to suffer. I refer to the Equitable, the Metropolitan, the New York Life and the Mutual Life of New York. Two of these companies I know, being unable to find satisfactory medical examiners in this community, voluntarily offered to restore the fee from $3.00 to $5.00, meanwhile, at the local agent's expense, they sent their applicants to San Francisco, in order to have better and more reliable examinations. The State in presuming to set a fee for remuneration, has seriously affected the status of the medical man, and since the success of this Social Health Insurance scheme depends entirely upon the medical man's active and hearty co-operation, it is not unreasonable to suppose if we withhold the latter, that the State will then grant us remunerative fees which are commensurate with our dignity and with our services.

It seems as if the State must recognize the fact, that we as a profession are not organized, or they would not dare to dictate to us in the matter of remuneration, what they would hesitate to do to the lowest organized worker in the State, whether he be scavenger or hodcarrier.

Recent developments go to show that the State Commission wishes this work distributed not equally among the many who signed the panel, but to a very few, in fact two in the profession, in this community.

From the payment of a stipulated fee per case, to the establishment of a capitation proposition is but a step; this is now transpiring in the English Funds, and well within the power of the Commission, thus we will have the evils of lodge and contract propositions to struggle with, but with the State as an opponent instead of a private company. It is to be truthfully inferred that we should be the loser thereby; and the Doctor, instead of being a voluntary contractor and member of a profession, will find himself in the position of a wage earner.

Again, while the State Accident Commission deprecates malpractice suits and does what it can to forestall them, nevertheless the surgeon is considered an independent contractor, and hence

liable to suit and judgment with damages, if found negligent; this forces us to take an increased risk, without returns at all commensurate with the responsibilities.

We have all seen cases of malingering under the workings of the Industrial Accident law; if such procedures as faking an injury or prolonging the convalescence after receipt of an injury, are not uncommon, how much more readily can the deception be practiced in cases coming under the strictly medical category? In England particularly, much dissatisfaction is expressed because at times the claim for compensation for aid is refused, on the ground of anemia and debility, for which rest, and rest alone, is prescribed; when the worker is tired and desires a rest, or perhaps sees a hard winter ahead with the prospect of steady employment diminishing, it is found that many make false claims of illness in order to receive the two-thirds pay. If prophetic vision be allowed us, and these Social Health schemes be put in practice, here in California, I can quite agree with Dr. Rubinow in what he says on page 271 of his valuable book, "Social Insurance," I quote: "For it is an unmistakable sign of the times, that private Medical practice is a declining institution, that it is expensive, wasteful, and inefficient, and it must give way to organized Medical Service"; in other words, gentlemen, if these Social Health laws are enacted, we soon will be in much the same position as a gardener, looking for a State job for the care of lawn and trees, or attendants looking for a position in the State Hospitals where politics and not worth and capability necessarily play the chief roll. In other words, we will have degenerated and degraded ourselves from an honored estate of free, independent citizens, practicing a noble calling, into mere public and State servants; personally, I am grateful to the fates for having been permitted to practice for seventeen years under conditions as they are, and not as they are likely to be, unless shoulder to shoulder, and with a strong common purpose of self-preservation, we present a united front and combat the inroads of fanciful, impractical and utopian schemes, which will seriously interfere with our well being, even our livelihood. Different bills have been presented in New York, New Jersey and Massachusetts, IDENTICAL IN THEIR WORDING, showing the same source; fortunately, they have been defeated, and defeat has been largely brought about by the indifference, and even the hostility of the workers themselves. It is a well known fact that Mr. Samuel Gompers is opposed to any form of Industrial or Health Insurance, save as a purely voluntary insurance.

But the defeat in the above mentioned States is not decisive, it has only been deferred and postponed for the time being. California's workers are not at all to be compared with those of the States mentioned (they being our most important manufacturing states), for our economic, social and financial status is vastly superior. Let us try to see that California is *not always* in the vanguard of freakish legislation, where such bills are entertained, if not passed, as the standardizing of Pullman sheets and the pensioning of retired baseball players.

EXFOLIATIVE CYSTITIS.*

By GRANVILLE MacGOWAN, M. D., Los Angeles.

Exfoliative Cystitis is a pathological process apparently arising in the course of vesical infection without any consistently definite or specific cause though passive congestion with ammoniacal decomposition of the urine are present. In its course primarily the epithelial layers at first increase markedly in thickness, but eventually become necrotic, separate from the submucous or muscular tissues beneath and are spontaneously discharged or removed surgically, either in the form of greyish or dirty buckskin colored and blood-stained casts of the complete mucosa, often with shreds of the muscular coat attached, or as small sheets of the same material. It is much like an exfoliative dermatitis, but unlike the latter accompanied by suppuration. There is also bloody, foul and purulent urine, increased frequency of micturation, irregular retention, and the passage of gravel preceding the exfoliation. The membrane when passed or removed is filled and covered with deposits of phosphate of calcium and triple phosphates. After the discharge or removal of the membrane, the bladder is raw and bleeds easily, but if kept clean, it is in time recovered with fresh epithelium. The capacity of the viscus is, however, permanently diminished, and hence frequent urination is the rule in those cases that recover.

The disease is much more common in females than in males, and has been often noticed as following passive congestion of the vesical mucosa in displacements, retroversion, of the gravid uterus. In males it has sometimes seemed to follow unclean instrumentation, but I am satisfied that exfoliative cystitis will not follow infection and retention of ammoniacal urine in males, without the element of passive congestion, promoting lowered vitality in the loose submucous tissues.

In Curtis' [1] case, in a woman of fifty-two, there had been some urinary distress for two years and attacks of hematuria and gravel for one year before she applied for relief. The infective agent was apparently a pseudo-diphtheria bacillus which was present in pure culture. An autogenous vaccine was used for treatment without benefit. Cystoscopic examination showed a dirty membrane coating all parts of the bladder mucosa, concealing the ureter meatii and from the vault hung many shreds "like stalactites in a cave."

The treatment of these cases is more simple than satisfactory when caused by retention following passive congestion due to uterine displacement; the discovery is made too late for operative interference. Reposition of the displaced uterus should be sought in the knee chest position. I have thought that those cases where the cause of

* Read before the Forty-sixth Annual Meeting of the Medical Society of the State of California, Coronado, April, 1917.

1 Curtis, J., A. M. A., January 16, 1915, p. 270.

the passive congestion is not clear, the pressure of a prolapsed stomach and colon demonstrated by the x-ray, into the pelvic cavity would furnish the explanation. I have traced the occurrence of moderate grades of chronic cystitis to this cause a number of times, and have cured my cases by posture and abdominal supports. If circumstances permit such investigation in case of exfoliative cystitis, I should adopt it and do recommend it.

In the presence of retained urine, an inlying De Pezzer or Malecot catheter should be used and the bladder cleansed frequently with one of the usual mild agents while at the same time, the kidneys should be kept active under forced water and moderate doses of Benzoate of Soda given to insure an acid urine being poured into the kidney pelves. No local application to the bladder, with the hope of dissolving or loosening the membrane appears to be of any value; pepsin, enzymol and the lactic acid bacillus have all been used, but the success is not encouraging. If diphtheria were shown to be the cause, or a pseudo-diphtheria, the use of antitoxin would certainly seem rational. The bladder should be examined from time to time with an operative cystoscope and any loose membrane removed through it. In women, the loose membrane may be picked up through a large calibered urethrascope and by gentle pulling, coaxed to, and through the bladder neck. Vaccines have doubtful values, for as my case shows, the organism present today may not be the predominating one in a fortnight. Santyl, or oil of sandalwood and hexamethylenamine are useful once the membrane has loosened itself. Cystotomy may be necessary for drainage or because, and this is particularly the case in males, the cast-off membrane is too large and full of stones, or too friable, to be withdrawn through the urethra. In no case should an attempt be made to separate the membrane by violence; in time the membrane will separate itself. In the meantime, general hygienic measures, good food and a continuous vesical toilette are the measures best suited for obtaining relief.

As soon as the ureteral mouths can be seen the function of each kidney should be determined and the damage done repaired to the best of the surgeon's ability by drainage, lavage of the infected pelves, the use of plenty of pure water and unirritating urinary antiseptics.

Judging from the cases reported in literature, the mortality is from 20% to 25% and complete restoration of vesical comfort is unusual.

Mrs. R. was taken ill on the 26th day of February, with pneumonia. I did not see her during this illness, but understand the pneumonia was of a severe type. When recovering, she was attacked with a severe cystitis, and at the same time had an abscess of the muscle walls of the abdomen on the right side. Cystoscopic examination was made by a competent urologist and showed a membraneous cystitis extending over the whole bladder mucosa. The mouths of the ureters could not be distinguished. The abscess in the abdominal muscles was supposed to arise from this condition of the bladder and perhaps due to a diverticulum. The abscess was opened and drained and a culture taken from it and also from the bladder. The bacteriologist making the examination reported both to be a streptococcus infection. A vaccine was made from these cultures and used a few times without any benefit. The abscess cavity healed in time; it was not connected with the bladder.

I saw Mrs. R. in consultation with Dr. Brownfield who was the attending physician on the 13th of April, for continuous incontinence. At that time her attendant thought her bladder would not contain any urine, but I found a retention of about 50 c. cs. of very foul urine. A culture made from this grew a perfectly pure colon bacillus. On April 14, a portion of the membrane presented itself at the meatus and was removed by gentle traction. This membrane was full of phosphatic concretions and was very thick. On April 17, I removed another large piece of membrane and then cystoscoped her. Quite a surface of the bladder wall was then free from membrane, but the ureteral mouths could not be observed. On April 25, she was examined again with an operating cystoscope and a number of loose pieces of membrane removed through it, together with a calculus which I crushed before extracting. On May 16, the cystoscopic examination showed the bladder free of membrane, both ureters could be plainly seen, both were dilated, the right one grooved, there being a channel in the bladder wall leading up to it like that made by a Fresno scraper. A ureteral catheter passed up the right ureter obtained 50 c. cs. of urine in a steady drip before the regular ureteral intermittent flow appeared; and on the left side 30 c. cs. The urine of both sides was cloudy, but that on the right side clearer than on the left. Microscopical examination showed a little pus and a few colon bacilli on the right side, and on the left considerable pus, epithelium, debris, urates, indigo, and an occasional red blood cell. Micro-organisms from the left side stained fresh as streptococci. She had a hydronephrosis of both kidneys, the dilation being greater on the right side and the infection greatest on the left. The pelves of both kidneys were washed out with a one-fifth per cent. of silver nitrate. A vaccine was prepared from the culture made on the 13th day of April, and the initial injection of 25,000,000 given on April 16. Injections were given at intervals of five days and the local reaction following each dose was marked but not severe. The quantity was increased until, on June 5, it was 150,000,000. The bladder was cleansed daily twice, by irrigations with mild antiseptic solutions. About May 1, dribbling ceased and she regained vesical consciousness, being able to tell when she wanted to urinate and having the power to do so, but there was some residual urine until May 16, when following lavage of the kidney pelvis with 5% silver nitrate this disappeared. From then until June 5, she had renal lavage with nitrate of silver solutions every

third day. When she left my care she had to urinate every two hours during the day and every three hours at night, her greatest bladder capacity being 60 c. c. Since her return to her home in Chicago she has been under the care of a celebrated urologist, who reports her general condition much improved but that the bladder capacity has never exceeded 100 c. c.

INTERNAL HEMORRHOID OPERATION AND AFTER CARE UNDER QUININE-UREA HYDROCHLORIDE ANESTHESIA.*

By E. JAY CLEMONS, M. D., Los Angeles, Cal.

In presenting this paper I do so with no intention of adding anything new to medical literature but simply because of the fact it is my belief this technic comes as near fulfilling the golden rule of surgery by "relieving our patient —pleasantly, safely and quickly," as is possible with our present knowledge.

I realize and respect the fact that every surgeon doing proctologic work develops more or less of an individual technic as the range of preparatory treatment, anesthesia, surgical procedure and after care, cover a great range of modioperandi, which is undoubtedly due to the fact a certain technic in one man's hands will not give the same results in other hands and because the success of this operation depends upon the operator's ability to control his patient and receive that patient's co-operation.

I therefore offer the following for an "Internal hemorrhoid operation and after care, under quinine-urea hydrochloride anesthesia."

In dealing with this subject I will use that classification of internal hemorrhoids which recognizes them in terms of degree, namely, first, second, third and fourth degree. First degree is that stage when the internal hemorrhoid has descended just sufficiently to be grasped by the external sphincter, during the act of defecation, and gives the symptoms of more or less acute pain and hemorrhage, which hemorrhage is characterized by spurting of blood during defecation. Second degree is that stage when the internal hemorrhoid comes past the external sphincter, which hemorrhoid returns without assistance after stool. This stage is characterized by pain during the act, the feces being blood streaked from coming in contact with the congested hemorrhoid. Third degree is that stage when the internal hemorrhoid protrudes at stool and does not return of itself but has to be replaced. This stage is characterized by the presence of a tumor mass. Acute pain and hemorrhage are not prominent symptoms as the mucosa is becoming thickened and accustomed to the condition. Fourth degree is that stage when the internal hemorrhoid will not remain replaced within the sphincters but remains exposed to the world and becomes of the appearance of skin.

During all these degrees the sympathetic nerve supply is at times, if not constantly, in contact with the external sphincter and our patient suffers from reflex interference with peristalsis characterized by gaseous distention of the stomach, constipation, faulty assimilation and elimination, as well as nervous manifestations from reflex and toxic origin.

In giving this classification, you undoubtedly noticed it referred to a single hemorrhoid. The symmetry of the hemorrhoidal areas correspond to the leaves of the clover. As the clover generally has three leaves the hemorrhoidal areas, also, are three in number and each passes separately through the different stages of degree, hence it is possible to have the three hemorrhoidal areas in different stages of degree at the same time.

While it is important to keep in mind the three hemorrhoidal areas in dealing with this pathology it is even more important to consider the intervening spaces, as this is the tissue which should be respected and utilized in the reconstruction of the anorectal region. Also, it is necessary to consider and attack the anal parts that gave way and allowed the hemorrhoid to descend from above to the first degree, from the first to the second degree, and so on, as it is to attack the hemorrhoid itself. In fact, any procedure which does not do this does not fulfill the requirements of a hemorrhoidal operation.

This brings us to the objects of the operation which objects are, first, to remove the offending hemorrhoid or hemorrhoids; second, to anticipate and eliminate the development of other hemorrhoidal areas; third, to repair the parts in such a way as not to interfere with the normal nerve supply, at the same time prevent the mucosa supplied by the sympathetic nerves from coming in contact, in the future, with the external sphincter which is supplied by systemic nerves; fourth, and lastly, to reconstruct the region to correspond to the natural condition and not have post-operative tags and contractures.

Some of the operative advantages of quinine-urea hydrochloride anesthesia are as follows: first, quinine-urea hydrochloride is not primarily an anesthetic, hence our operative anesthesia depends upon operative technic; second, in following the operative technic it is necessary to proceed so slowly that you do not hurt the patient, by so doing there is the great advantage of the definite knowledge of the exact amount of pressure you are using; third, quinine-urea hydrochloride is non-toxic which fact enables the operator to use the desired quantity of the anesthetic solution to prolapse and anesthetize the pathology and bring out the intervening spaces referred to; fourth, by being able to prolapse the hemorrhoidal area and put the intervening spaces on the stretch it enables one to remove the hemorrhoid and leave the intervening mucosa to cover the surface; fifth, the amount of pressure necessary to prolapse the hemorrhoid distends the skin just sufficiently to denote the amount of skin that is necessary for removal.

Some of the post-operative advantages of the use of quinine-urea hydrochloride anesthesia are as follows: first, being non-toxic, there is no reaction as after the use of certain toxic drugs;

* Read before the Surgical Section of the Medical Society of the State of California, San Diego, Cal., April 19, 1917.

second, it is not necessary to use drugs of the nature of adrenalin to block off the absorption, hence there is no interference with blood pressure; third, quinine-urea hydrochloride being a mechanical irritant to the tissues causes the production of a plastic fibrinous exudate, which exudate is of a decided advantage when operating in this region, as it brings the elements of repair to the parts, and after the first sanguinous exudation, minimizes post-operative oozing; fourth, there is produced what is to the patient, at least, the main advantage—that being the post-operative anesthesia, which anesthesia lasts during the period the fibrinous exudate is being absorbed, which is generally from five to seven days; fifth, the plastic exudate having been thrown out and absorbed produces a barrier which enables the operator to safely get his patient on his feet and back to his occupation during the process of repair.

Before proceeding with any anorectal operation it is very necessary to make a proctoscopic examination at which time the patient should be instructed in regard to taking and relieving himself of the enema solution, so as to give no trouble at the time of the operation. Instruct him to take no laxatives, to eat as usual, take tub bath the night before, and have for the preceding meal dry toast and black coffee.

Placing the patient on the left side, shave and cleanse the parts and give a two quart cold water enema. This requires plenty of time as it takes patience to overcome the spasm of the rectum and sigmoid. Proceed by allowing the water to run slowly till the patient begins to complain of pain, then stop and wait till the spasm passes when you may proceed again until the beginning of the next spasm. If he is unable to retain the water, lower the enema can and let the water return into the can, but do not let him expel it. If there is gas in the bowel it will pass through the enema solution. After the first sixteen ounces have passed and the rectum and sigmoid have relaxed, the balance will then pass freely until the solution is nearly all taken when he will again complain of pain due to distension of the colon. After giving the full two quarts, have the patient use a slop-jar so you can tell exactly when your two quarts have come away. Give instructions to strain forcibly and stop the instant the water gushes forth. Wait till there is sense of pressure, at the same time knead the abdomen slowly from right to left over the colon. In this way, six or eight ounces are expelled at a time, the bowel contents coming down from above to fill the rectum each time. When the patient is unable to expel any more in the sitting posture, have him stand up and knead the abdomen, between evacuations, and he will bring away two or more evacuations, in this way returning the water thoroughly mixed with bowel contents.

Owing to the fact the patient strained during each evacuation he completely prolapsed his hemorrhoids. With hemorrhoids prolapsed place patient on his left side, with knees flexed on abdomen and two pillows between knees.

Cleanse the parts and see that all instruments and solutions are cold, before proceeding with the operation, as any heat applied to a visceral area gives pain.

In giving the technic of this operation, which is adaptable to all degrees of internal hemorrhoids, I will describe in detail the removal of the left hemorrhoidal area in the stage of third degree. Under classification you were reminded of the fact that the hemorrhoidal areas are three in number, one of which is on the left side and two on the right side; this is owing to the fact the median raphe of the body lies to the left of the median line, in this region, both above and below. This establishes the left hemorrhoidal area in the center on the left side. For convenience, will give the details of this operation in four stages.

First stage: Select a point upon the skin, one-half inch to left of the anus, and apply an applicator which has been dipped in phenol, to anesthetize the skin and mark the point for the insertion of the needle. When the point has turned white insert into the loose subcutaneous tissue a fine hypodermic needle attached to a half ounce metal syringe loaded with one-half of one per cent. quinine-urea hydrochloride solution. Inject this solution very slowly. At the first indication of pain stop and wait till the pain ceases. Then inject a little more solution, being sure to inject so slowly that you do not blanch the parts. In distending the tissues and producing pressure anesthesia use the one needle point which is indicated by the puncture mark on the white background of the carbolized area, by so doing you avoid your solution running out of a former needle point while injecting at another. After thoroughly distending the parts from this one puncture you find just the area you wish has been distended as the solution from this puncture will not pass the raphe between the hemorrhoids but will distend same. By injecting the solution as directed you have not distended the hemorrhoid but have prolapsed same, and this brings out the line of the anorectal junction, because the hemorrhoid is dark in color while the anal parts are lighter than normal from being distended. It is not necessary to anesthetize the hemorrhoid as it is supplied by the sympathetic nervous system, but it is very necessary to have all solutions and instruments cold and not make any sudden traction. Now pass a sharp ligature carrier threaded with number two ten day chromic catgut, beginning at the junction of the hemorrhoid and the raphe below at the anorectal line, pass deeply, penetrating the deep fascia coming out at the junction of the upper raphe and the hemorrhoid on the level with the anorectal line.

Second stage: Remove the ligature carrier, leaving double ligatures. Place forceps on each end of these ligatures. Grasp the skin with a vulsellum and draw same on the stretch. While thus making traction on the skin, place another vulsellum at the level of the anorectal line, one blade at each exit of the ligatures. This vulsellum is placed for two reasons, first, in case of accidental cutting of the ligature in the removal

of the hemorrhoid you have your land-marks for placing another ligature, and second, a branch of the inferior hemorrhoidal artery enters the parts through this tissue. After placing the two vulsellum forceps, try the ligatures to make sure that they have not been caught within the grasp of the vulsellum. If free, cut the skin up to ligature.

Third stage: Grasp the hemorrhoid with sponge holders and make traction slowly and steadily outward and downward until normal mucosa is exposed. Now tie each ligature separately around the base of the hemorrhoid. In making the first knot, do so very slowly so as not to hurt the patient, as the parts have not been anesthetized and any undue sudden pressure or traction gives pain. After making the first tie, the others can be made more rapidly as the first knot produced pressure anesthesia.

Fourth stage: Cut away the hemorrhoid just external to the ligature. Remove the vulsellum. If there is spurting from the inferior hemorrhoidal artery ligate same with plain catgut. Let the stump of the hemorrhoid free. This stump is anchored by the ligature to the deep fascia and cannot retract within the sphincters, but remains at their junction just above the external sphincter. There is just enough stretch on the skin to bring the two edges together, at the same time not interfering with post-operative oozing, which is very essential, as any interference with oozing produces oedema of the skin and post-operative tags.

Repeat the procedure by passing through the four stages with each hemorrhoid on the right side, except when dealing with hemorrhoids of the first and second degree, in which case the two right hemorrhoidal areas should be removed at one time, taking away twice the amount of tissue on the right as you did on the left side. It is always advisable to operate on both sides in each and every case of hemorroids to avoid future trouble.

After completing the operation, place a perineal gauze dressing smeared well with petrolatum. Have a binder adjusted tightly to the patient, extending from the pubes to above the ensiform, and place a perineal band of muslin attached behind, divided to perineum and attached laterally in front, drawn tightly. Leave instructions that the binder or dressings are not to be disturbed. The patient is to have six ounces of water every four hours to be sipped every fifteen minutes, at the rate of one and a half ounces an hour. The reason for these instructions is that by constant sipping we keep up peristalsis, and the binder being tight, gas passes below and when gas passes, the urine is voided freely.

Next morning dress the parts, using no solutions. Replace fresh dressings smeared well with petrolatum. See that gas and urine have passed. If so, have the sipping of water stopped and give four ounces of beef broth and four ounces of pineapple juice every four hours, the broth to be drunk hot and the pineapple juice to be sipped every fifteen minutes at the rate of an ounce an hour. This gives the patient forty-eight ounces of liquid every twenty-four hours, with nourishment enough to carry him. Change dressings once every twenty-four hours for the next four days. On the fifth day, give a luke-warm plain enema, instruct the patient to take a tub bath at night, and dress the parts using a small amount of thymol iodide, as a dusting powder, on gauze.

Put him on a full diet and give one grain of phenol-phthalein night and morning till the bowels move freely, then give one grain at night and gradually decrease the amount. Have the patient resume his occupation as quickly as possible after the fifth day. Instruct him to report twice a week for observation, during the next six weeks, at which time note the progress of healing, and do not dismiss the case until the parts have healed and you can pass, without injury, a seven-eighth inch anal dilator.

In conclusion, I will say a case proceeds to recovery with practically no discomfort, provided, we handle our operative technic in such a way as not to hurt our patient, receive that patient's co-operation in sipping liquids, supporting perineum, and going about his business; by so doing, our patient is relieved *pleasantly*. If while following the operative technic we attack and remove only those tissues necessary to give relief, and by the use of the mechanical irritation of quinine-urea hydrochloride we bring the products of repair to the parts, the healing will proceed *quickly*. Not having interferred with the higher centers, and by the use of quinine-urea hydrochloride we produce a natural barrier, we can say we relieved our patient *safely*. This makes me believe we come near fulfilling the Golden Rule of Surgery by "relieving our patient—pleasantly, quickly and safely" in a class of cases, composed of a large percentage of patients that would generally be considered the age for safe surgical intervention because the average age for the development of first degree hmorrhoids is about forty years, and the time necessary for the evolution from first degree hemorrhoids to third degree is generally ten years, which brings the average age for the beginning of the third degree hemorrhoidal period at fifty. As unrelieved pathology persists during life, this necessitates our dealing with a class of patients the large percentage of whom are in the fifth to the eighth decade of life.

SOME REMARKS ON LARYNGEAL AFFECTIONS.*

By H. B. GRAHAM, M. D., San Francisco.

In no branch of medicine is there exhibited more neglect on the part of the medical men than in diseases of the larynx. A hoarseness may go on for months even under the eyes of a specialist and the patient told he has some insignificant affection that will soon pass off without even an examination being made. The cause of this is easily seen when one watches the methods pursued in the education of the average medical student. I believe that no student should be allowed to leave college without a thorough familiarity with

* Read before the Pacific Coast Oto-Ophthalmological Society at Spokane, Wash., June 18, 1917.

the method of examination of the larynx and that he should be so familiar with the normal picture as to be able to pick the abnormal and see that the early lesion is placed in the hands of the specialist. Interns should be compelled to examine the larynx of each one of their patients as a routine just as they do the urine, and then we would not have the disasters we see among people who have honestly sought the advice among what they have been told are competent physicians. He is taught the histology, anatomy, symptomatology of the subject fairly well, but the technic of examination he invariably misses and this is the most important element.

Histologically the classification of intra laryngeal growths is very simple; we do not get the complexity of tumors that we find in other parts of the body. Tuberculomata, syphilitic growths, carcinomata, fibromata and papillomata about comprise the list as the myxomata, which have been described, do not invade the larynx; we simply have a myxomatous degeneration of the fibromata; cysts and fatty tumors are so rare that they become curiosities. Singer's nodes are histologically fibromata. Histologically the fibromata and papillomata are easy to distinguish if the specimen has been fortunately obtained, the fibroma being a tumor with a connective tissue base covered by a thin layer of regularly placed epithelial cells and the papillomata being the reverse, a mass of epithelial cells with a small core of connective tissue. Our difficulty in diagnosis arises when we have a section through a papilloma not containing any of the connective tissue, so that we do not get the peculiarly regular line of demarcation between the two elements which is such a valuable help in eliminating carcinoma.

Personally I have had difficulty in making histological diagnosis in carcinoma in only one out of five cases; here there was a positive Wassermann with a pretty clear history of a luetic infection. The growth was not affected, however, by strenuous anti-luetic treatment and after a third attempt a definite histological diagnosis was made and a laryngectomy done. For our surgical purpose the malignant growths are divided into glandular and squamous celled. The former dip into the underlying connective tissue undermining the normal appearing mucous membrane so that the growth is far more extensive than appears to the eye. These growths have a tendency to invade the lymphatics early so that by the time a diagnosis is made the growth has become more extensive and requires a radical operation. Although Semon and Gluck fifteen years ago gave their warnings regarding these growths, appealing to the medical profession to institute a thorough investigation of all cases of hoarseness lasting over a couple of weeks time, yet the profession is still guilty of lulling these cases into inactivity with their assurances that there is only a slight *ulceration* which will disappear in time and that the specialist is simply over enthusiastic. One such case, regardless of the most frantic efforts on my part, was carried along to a laryngectomy, whereas I saw it and made a clinical diagnosis a year previous when there was but a small circumscribed tumor involving the middle one-third of one cord with no interference in function, an ideal case for a double curette by the indirect method. The squamous-celled carcinomata show a lesser tendency to invade the underlying tissue or to form metastases through the lymphatics. They grow slowly by contact and give a fair chance for a cure by intra-laryngeal methods if taken early. The hanging laryngoscopic method of Killian is extending the application of intra-laryngeal work in this direction. In the majority of cases it is not necessary to make a histological diagnosis of either lues or tuberculosis, the clinical appearance is enough, but Simon has reported three cases of tumor all identical in appearance, one lues, one tuberculosis and the other carcinoma, so that in isolated cases care must be used before a decision is made.

Too much has been said concerning the origin of carcinoma, tuberculosis and luetic growths to need review here, but the fibromata are interesting in that there appears to be two distinct types, one of which is due to an irritative process at the edges of the cords, probably non-tubercular; the other is a modified prolapse of the mucous membrane above or below the cord which is built on a tubercular or luetic base. The patient with the latter condition complains of a persistent hoarseness from which he partially recovers and a year afterward there is discovered a polyp swinging in the glottis or hanging from the inferior surface of the cord, which after removal does not return, the causative process having disappeared. The field is wide open for the discovery of the origin of warts, and thus to that of their sister growth, the papillomata.

The position of the squamous-celled carcinoma is one of the determining factors in its operability. One occupying the middle third of a functioning cord is certainly worth a trial by intra-laryngeal methods either direct or indirect. The position of the fibromata gives us some very interesting phenoma. I have seen them springing from the sinus of Morgagni and dropping down into the glottis so that in phonation the polyp had to be expelled to a position above the cords before speech were possible. Again they may occupy such a position that they occlude the glottis when the patient assumes a reclining position. The patient soon learns in which position he may sleep at all, otherwise he has no inconvenience. Many large polyps have never been suspected during life, having been discovered during autopsy.

As a help in the diagnosis it is well to remember that the posterior half of the larynx is more apt to be the seat of tuberculosis and the anterior two-thirds the seat of all other growths, that the papillomata are peculiar to the young, fibromata to the middle life and carcinomata of later life. Contrary to the teachings of the literature typical early growths have, in my experience, been rather easy to recognize; the cauliflower excrescence occupying the middle third of the cord gives a far different appearance from the smooth, firm sessile

fibroid occupying the same position, or the pendulous polyp springing from the sinus of Morgagni or the multiple papilloma of childhood. It is in the advanced ulcerated tumor occupying the larger part of the larynx on an oedematous base with the inflammation involving the oesophagus and the glands of the neck where I have experienced the greatest difficulty. The Wassermann and tuberculin reactions do not help, as either lues or tuberculosis may be present and still we may have a carcinoma. The hanging method offers in these cases a better opportunity to procure a specimen, as a deeper incision may be made than by indirect methods and a piece of the connective tissue must be procured.

The symptomatology is a great help in the diagnosis, as in lues and tuberculosis we have pain, in the others none in the early stages, and at no time do we have pain in the benign tumors. Continued hoarseness is always most pronounced in those affections built upon an inflammatory base. Even in these affections the degree of hoarseness is no indicator of the amount of involvement and we may be astonished at the comparatively good tone that comes from a larynx half eaten away with an ulcerative lesion. The upper part of the larynx is a good substitute; in one case where I had removed both vocal cords and the false cord on one side, I was agreeably surprised the next morning to hear the man carry on a conversation with me with but little difficulty. People with fibromata and papillomata, even though they have a clear voice, tire out very quickly and become hoarse. One of my fibroid cases was a lecturer. He could do very well for about an hour, but the effort to force the polyp through the glottis so as to keep the vocal cords free would then get the better of him and he would have to rest for a half hour or so. Singers with growths on the cords have a tendency to lose control of the voice at times and they are always in terror lest the voice will break.

The treatment in nearly all of these cases is operative. The treatment for syphilis is sufficient for luetic growths, and some tubercular affections are best left alone. Some prefer to treat singers' nodes by the exercises, but I have been so successful in their removal by a double curette that I do not see the necessity of putting the patient through such a long course of tiresome stupid exercises. However, it is not every singer that will trust himself to an operator, no matter how sure he may be of his ability to operate without injuring the cords. His cords may be his only means of making a livelihood, and although the operator knows he can remove a node without in the least damaging the cord, the patient does not know it and one has to have the exercises to fall back on.

Papillomata are probably best left alone, a tracheotomy tube being inserted as occasion demands. The more they are operated the worse they become and they disappear in time as do all warts. I have tried the application of the X-ray through the neck following intralaryngeal operative procedures without effect, the growths reappearing inside of six months to nearly fill the larynx.

The treatment of all other intralaryngeal growths is operative, the type of operation depending upon the character of the growth and the skill of the operator in handling the different instruments. A great stride in advance has been made in out handling of these growths by the introduction of the hanging method of Killian, and I believe that many growths will be removed this way that were formerly done by a laringo-fissure, but its introduction has carried with it a lessening of the skill of the laryngologist in the handling of the indirect method. A little practice and the indirect method can be easily acquired and is so useful in the cautery of tubercular growths and in the incising of cysts and the removal of small tumors that it will repay the operator for his efforts. A major operation becomes a matter of ten minutes in his office under cocaine and a difficult task a simple pleasure. The lack of ability on the part of the specialist to handle these growths by the indirect method is due all over the world to an unwillingness to teach the subject properly. In most instances the physician sits beside the operator, watches the motions he goes through and then goes and does likewise on the poor unsuspecting patient, with a disastrous effect as a rule both to the patient and to the operator. No skill can be acquired without work. One has to train himself by hours of patient practice, operating against the image in the mirror before he instinctively places his instrument in the correct place. This practice can not be acquired on the patient even in the most crowded clinic, but must be on the table with diagrams and paper tubes representing the larynx. The hanging laryngoscope may be used on a cadaver best, as the manikins do not afford enough difficulty. The first difficulty which I have discovered the student encounters in his indirect examinations, is his inability to place the pharyngeal mirror against the uvula and the palate at such an angle as to expose the larynx. His second difficulty is to keep it quiet so as not to cause an active throat reflex, his third is to keep the tongue out of his way. The first two are overcome by practice, the last may be corrected by allowing the patient to hold the tongue out with a piece of gauze while the student depresses the tongue with a spatula. This will give him his first encouragement and he will soon be able to do without one or the other. A little cocain will often help the student out and is a valuable adjunct to the specialist himself when making a close diagnosis. For operative purposes it is my custom to use cocain 20% freely with a syringe and camel's hair brush, as the absorption from the larynx and trachea is practically nil. The patient, however, should not be allowed to swallow during the cocainization. Operators have often complained to me that the epiglottis was frequently in the way of their vision. I have found that this can be remedied by placing the patient on a higher stool than that on which the operator is sitting. Operation by the direct method should be done quickly after anæsthesia is obtained, as the effects soon wear off and one has to stop for more

cocain. I can not urge upon the laryngologist enough the effort to improve his technic in the handling of intralaryngeal cases by means of the indirect method, as the ease with which he works will more than repay him for the effort he puts out, and I would urge that he should not let his enthusiasm for the hanging method interfere with his training for this old established method.

REPORT OF A CASE OF OTITIC MENINGITIS.*

By EDWARD CECIL SEWALL, A. B., M. D.,
San Francisco.
(From the Ear, Nose and Throat Clinic, Stanford University Medical Department.)

While the following case presents a picture that is quite typical of the course of a streptococcus mucosus infection, it is still not out of place to be reminded of the insidious character of that organism. Also although the clinical signs of meningitis were not out of the ordinary there were some interesting facts brought out in the repeated examinations of the spinal fluid. Then, too, it is rather the exception when we cannot trace the pathway of the lesion to the meninges either in the autopsy room or laboratory.

Mr. R. L. D. was brought to Lane Hospital September 16, 1916.

Family history, negative.

Past history: General health good, usual children's diseases. Significant is the history he gave of a purulent discharge from the nose that he had had for years. There was no acute sinus trouble, to his knowledge.

Present illness: Complains of headache and pain in and about the left ear, with swelling about the ear, mastoid and neck. No discharge. Although he worked as motor man up to the day of coming to the hospital he had suffered off and on with that ear for three months. Earache had followed snuffing of water up the nose for his "catarrh." There had been considerable pain, but not the typical otitis with rupture of drum and free discharge of pus. He was not certain that there had been any discharge. Certainly not in any amount. In the last week the headache had been very bad and the boggy red swelling had appeared in the past few days.

There was no vomiting nor chills nor nausea nor dizziness until the morning of the day he came to the hospital. He became very dizzy on that morning on raising up in bed or assuming the upright position, and when he tried to walk he staggered and then only became nauseated and vomited and felt somewhat chilly.

He is habitually constipated, but as his bowels moved slightly the day before he entered the hospital obstipation was not present.

His wife notes that the past few days he has not been as alert mentally as normally.

EXAMINATION.

Head—No abnormalities, except swelling about left ear.

Eyes—Pupils equal, react normally to light and accommodation. Eyes are normal in all respects including the fundi, except for a marked lateral nystagmus to the left with only a trifling rotatory element. This is present on looking straight ahead, and to the right, and much exaggerated upon looking to the left.

Nose—Right side roomy. M. M. somewhat inflamed and covered by thin discharge, whole picture suggestive of sinus disease. Left side deviation of the septum, otherwise same condition as right.

Mouth—Tongue protrudes straight, slightly coated, and there is a slight unpleasant odor to breath. Teeth fairly well preserved and kept. Slight pyorrhea alveolosis.

Naso-Pharynx—Slight amount of muco pus on posterior wall, apparently coming from the ethmoid regions.

Neck—Swollen on left side and sterno-cleido-mastoid muscle stands away and is tense. Otherwise no abnormalities. *There is a slight rigidity of the neck, not accounted for by swelling about mastoid.*

Chest—Well arched, symmetrical, no impairment of percussion noted. Movements equal. Breath sounds clear, except for few fine crackling rales at bases.

Heart—A. C. D. not enlarged. There is a definite systolic murmur, action smooth vigorous, apex 5th space in nipple line.

Abdomen—Soft, full, muscle wall good tone, no tenderness or rigidity.

Extremities—Normal findings.

Reflexes—Knees active and equal, *no Kernig,* no Babinsky, no Oppenheim.

Glands—Negative.

Skin—Clear, hot, dry. *Dermatographia marked.*

Weight—145, before illness 156.

Urine report—Negative.

Ears—Right; drum normal. Left; there is considerable swelling and edema about the mastoid. The sternomastoid is tense and stands away from the head. There is extreme tenderness in front of ear. Patient says that at one time this region was more tender.

External canal swollen in entire circumference, but more marked in upper posterior quadrant.

Region of drum can only be indistinctly seen because of extreme swelling of canal, no details can be made out. Some desquamated epithelium can be seen filling fundus. *There is no discharge,* but a cotton swab introduced into fundus has slight color.

Hearing—Schwabach normal, Weber left, Rinne positive right and negative left. Low whisper right 4/8. Left loud whisper 3".

Spinal puncture made—15 c. c. withdrawn. Well marked increase in pressure. Fluid was slightly hazy, like ground glass.

Examination—Total cells 2980.

Leucocytes 2600.

Nonne + + + +

Noguchi + + + +

Colloidal gold, 0—0—0—1—2—2—0—0—0—0

Sugar reduction, negative.

Examination of this spinal fluid showed the

* Read before the Forty-sixth Annual Meeting of the Medical Society of the State of California, Coronado, April, 1917.

leucocytes to be of the poly-morpho-nuclear type and streptococcus mucosus was demonstrated in the spinal fluid.

Wassermann—Negative.

Blood count—14,000 3:30 P. M. 86% polys. 13% lympho. 1% large mono. To sum up the findings as they appeared on his entrance to the hospital:

Acute mastoid left side three months' duration, with no definite history of discharge, headache constipation, dermatographia, nystagmus toward the affected ear, dizziness, normal fundi, slight stiffness of neck, no Kernig, Bobinsky, or Oppenheim. Mentality good, face drawn and general appearance that of a very sick man. An outspoken purulent meningitis with bacteria in the spinal fluid.

Operation—Patient operated upon at once. Pus was found in the mastoid under pressure. Culture made of this later showed gram positive diplococci.

Diseased bone extended down to the dura overlying the sinus. The dura exposed in all directions widely, making an opening in the bone about 6 cm. in longest diameter. Perfectly healthy normal looking dura was reached in all directions. Over the lateral sinus there was an area of discoloration about 1 cm. in diameter, but nowhere was there any roughening, granulation tissue or such evidence of penetration of the dura.

With sterile needle and syringe the sinus was explored and found to be free from thrombosis. The dura transmitted the pulsations of the brain everywhere and was not otherwise opened.

The operation was now converted into a radical one. The middle ear was found to be full of epithelial debris resembling cholesteatomatous masses.

No plastic was made, but the whole wound was left open and packed lightly with iodoform gauze.

SUBSEQUENT COURSE OF CASE.

Sept. 17, day following operation—The temperature ranged about 103° Rectal, as shown on the accompanying chart. The pulse, however, was slow in proportion to the temperature. Lack of fundus changes and blood-pressure of 145 systolic and 85 diastolic certainly argued against great increase in intra-cranial pressure. As did the fact that removal of the spinal fluid did not increase the pulse rate to any degree.

The spinal fluid was drained again on this day. It showed no more turbidity than on the 16th, the leucocytes were slightly fewer, 2511 as against 2600 per c.m.m. Nonne + + + +, Noguchi + + + +, sugar reduction negative. The leucocytosis was polymorphonuclear type, and the fluid showed the presence of streptococcus mucosus.

The nystagmus was markedly improved but still present on looking toward the affected side. Patient complained of headache, took no nourishment, vomited once before and once during lumbar puncture. The blood count showed an increase in leucocytes 16,800 as against 14,000 the day before.

Sept. 18, second day after operation.

Patient passed fairly comfortable night, temperature again ranged all day about 103° Rectal. Dose of castor oil was given with good result.

Lumbar puncture was again made and 12 c. c. withdrawn. Still under appreciable pressure, but at no time during the illness did the spinal fluid appear faster than by drops, except during tension of vomiting when it spurted. The leucocytes still mostly polymorphonuclear were 1460 to c. m. m., a decided drop from the day before; Nonne + + + +, Noguchi + + + +, sugar reduction negative, and again streptococcus mucosus demonstrated.

In the afternoon it was noticed that the left pupil was larger than the right. Complained of severe pain in back of head. Nystagmus was entirely gone, but there was at times a slight transient diplopia.

Sept. 19, third day after operation.

Condition seemed to be improved, patient felt better, took nourishment, headache not so bad. The Kernig is still negative, 26 c. c., spinal fluid withdrawn. It was about the same in all respects as before, *not more clouded, and the number of cells was much reduced,* 1386 per c. m. m., the poly morphonuclear type predominating.

Temperature at 4 P. M. was 104^6 Rectal, higher than at any previous time, the pulse 96 and respiration 26. The fundi were normal, but left pupil the larger. Mentally clear when spoken to. Still later in the day became somewhat drowsy.

Toward evening began to pluck at bed clothes and went into a mild dilerium. *Blood culture was taken.* Culture in $Caco^3$ broth showed a growth of a gram plus, diplococcus, some in short chains. The organism acidified milk, acidified and coagulated inulin, but produced no change in glucose broth, lactose and saccharose albumin water, dextrin or in mannite. Blood count was 15,940 with 76% polys, 22 lymph, 2 eosin.

Sept. 20, fourth day after operation.

Restless but dozing, more dull mentally, involuntary urine. Left pupil larger and double abducens paresis, fundi normal.

Temperature raised gradually all day till at 9 P. M. it was 105^2 Rectal, pulse 84, respiration 36. Blood pressure sys. 170, Dias 80. Coarse mucous rales at both bases, raises some thick blood-stained sputum.

Spinal puncture made and 26 c. c. spinal fluid drained away, pressure about the same and fluid same as before except the peculiar fact noted from the start that the white cell component was more reduced, 960. Blood count was 15,600 whites.

Sept. 21, fifth day after operation.

Patient in bad condition, pupils dilated, right reacts more promptly than left. Speech difficult, tremor of lips, respiration rapid.

Tension the same on both sides in lower extremities, patellar reflexes equal, not particularly lively, Kernig-maneuver produces some distress, but not definite. Neck rigid, movement painful, somewhat delirious.

2 P. M.

Pupils both dilated and react slightly to light. Left pupil larger than right. Fundi normal.

Beginning pneumonia on right side.

Highest temperature on this day at 4 P. M. was 105.7° Rectal, pulse 124, respiration 54, blood pressure 170.

Lumbar puncture was made and 38 c. c. drained. It was no more turbid than on the first day, the number of cells had daily decreased until now there were but 860 per c. m. m. Still the polymorphonuclear type predominating, large numbers of streptococci.

Patient died at 7 P. M.

Post mortem examination made by Dr. Ophüls, Sept. 22, 9 A. M.

Strongly built, well nourished man of about 45 years of age. There is a marked rigor moris. Marked cyanosis of face and neck. The pupils equal and moderately dilated; teeth fairly well preserved; well kept. No enlargement of lymph glands; no edema. Behind the left ear is a wound of a recent mastoid operation. The wound is wide open, contains a gauze drain. At the bottom of the wound is a collection of purulent discharge. The dura is exposed over a large distance. The sigmoid sinus is exposed quite a distance at the bottom of the wound. No perforation or necrotic spot in dura. The temporal muscle near the operation wound is somewhat discolored, more or less hemorrhagic. The scalp and skull cap normal. The dura is rather tense. Dark fluid blood in the longitudinal sinus. The pia on right side is markedly congested, rather dry. There are collections of yellowish green coagulated pus in the sub-arachnoid space in several places, especially in the parietal region near the long fissure; at base the meninges are more thickened, somewhat more moist, are more extensively infiltrated with pus, especially near the point of the temporal lobe; especially at the chiasma, sylvian fissure, lower surface of pons and lower surface of cerebellum. In the posterior fossae there is a collection of slightly turbid cerebrospinal fluid. The pia matter over the medulla and upper part of cord is somewhat congested, but not infiltrated with pus. Large venous sinuses at base of skull are normal. Opening in temporal bone measures 6 cm. in largest diameter and peripheral part of the pyramidal portion has been removed to region of the middle ear. The acoustic nerve where it emerges from the foramen is heavily infiltrated with pus. What remains of the pyramidal part of the temporal bone is removed for examination (Dr. Sewall). There is a slight flatness of the convolutions on both sides. The large arteries at base of brain are normal. The lateral ventricles are moderately dilated and filled with turbid fluid containing some flakes of pus. The hypophysis shows slight infiltration of pus on upper surface. Examination of head only permitted. *Diagnosis:* Otitis media, acute. Meningitis, acute.

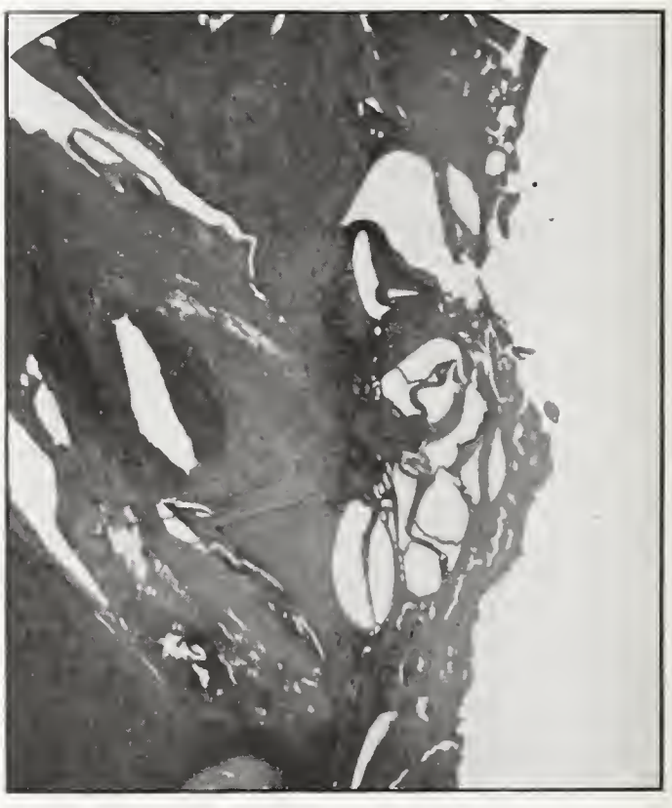
Microscopical Findings:

Sections of Brain: Show very marked infiltration of the pia mater with polymorphonuclear leucocytes and large phagocytes. There is also much fibrin; cortex underneath is very much congested, otherwise apparently normal.

Smears from wound shows many polymorphonuclear leucocytes, some diplococci and staphylococci.

Smear from meninges shows a great many polymorphonuclear leucocytes and many encapsulated, somewhat lancet-shaped gram plus diplococci in short chains.

Histological examination of the temporal bone showed the following: The semicircular canals



were everywhere found to be free from pus or other evidence of abnormality. This would be in line with the fact that the nystagmus was immediately improved by operation and eventually disappeared. There was nothing found to explain the nystagmus. This must be accounted for on the same lines that we explain the nystagmus is an acute otitis that disappears on incision of the drum. The cochlea showed no purulent involvement and this was borne out by the hearing test. There was, however, an abundance of pus found accompanying the nerve in the internal auditory canal. It is found as far as the modiolus. The post mortem showed pus in quantity in and about the internal auditory meatus. The pus in the internal canal evidently entered from the cerebral side. This shows how it is possible to have the cochlea or other parts of the internal ear involved by extension of a purulent process in the skull.

Although pus was found in the internal auditory canal no connection was found between the purulent process in the middle ear or mastoid and the infection of meninges.

While the spinal fluid can often be taken as an index of the extent of involvement of the meninges the cell count in this case shows how the greatest dependence must be placed upon the clinical picture. Usually the cell count keeps

pace with the progress of the disease. A decrease in the number of cells in the spinal fluid is considered prognostically favorable. The fact that the fluid in the canal can be cut off from that in the cranium and form a poor index of the true condition of the latter is shown by the figures in this case. The initial count showed 2600 cells to the c. m. m. and these were of the polymorphonuclear type. Counts taken on successive days demonstrated a diminution in the number of these cells. The count on the day of death being 860 cells to the c. m. m.

The same condition was present in another case recently observed in the clinic. A cell count taken at the time of the mastoid operation being in this instance 1040 the c. m. m. The counts taken on successive days showing 536, 97, 216, 251, and the patient dying the following day.

Closure of the foramen of Mazendie is given as the probable reason for the lack of participation of the spinal canal to the extent of the cranial meninges. This is borne out by the failure of the Kernig and other spinal signs which presented in both of these cases.

AN INTERESTING OPERATIVE EAR CASE.*

By CULLEN F. WELTY, M. D., San Francisco.

Dr. H. C. Moffitt's Medical Report: The history was negative, except for measles and mumps in childhood. Headaches, a year ago when he commenced wearing glasses. Quite frequent nose bleeds during the summer months in Reno. Very infrequent colds. He seemed a perfectly well man in every way until December he began to have cold, headaches, slight cough and aching of the limbs. He quit work from December 10th until December 23rd. At end of this time, feeling better; but cough continued and he gradually got worse, until the middle of January, the paroxysms were so severe as to make him vomit. On the 20th of January, following a severe coughing spell he vomited, his cough stopped and did not recur. He started to hiccough. This first attack lasted for four days, with occasional short intermissions. Following this time, hiccough and dizziness troubled him until he came here March 9th. On February 22nd, for some reason not apparent, he had a paracentesis of the right ear drum. This was repeated February 29th. There has been a slight discharge from the right ear ever since. Just before he came, on first arising, he felt nauseated and vomited. When I first saw him, he had a slight nystagmus on looking to the right, otherwise, the cranial nerves were perfectly normal. The veins of the eyelids were a little prominent. Arteries a little stiff. A little emphysema of the lungs. Few dry rales on the left lobe, right side. Hiccough involving both sides of the diaphragm. Spleen enlarged a little by percussion. Rather faint abdominal reflex on the left, otherwise normal.

The first days, when seen at St. Luke's, he did reasonably well. Hiccough was controlled by medication. He had dizziness when he would sit up or turn to the right. Nystagmus to the left and right; always moderate in degree. He became morose and restless. At times, just after hiccough attacks would cease, he had a temporary confusion, with inability to speak or understand. At this time, fundus which had been normal on entrance, showed gradual swelling of the disc and edema of the retina, right more marked than left. Slight incoordination of the left hand. No abnormalities in reflexes. Occasionally slight headache. By March 12th, there had been a good deal of increase of headache, with inability and stupor. At this time, choked disc, occasional vomiting; lumbar puncture showed fluid under pressure and this relieved the headache.

All this time various diagnosis had been considered. Apparently, labyrinthian reactions to caloric tests were normal. Slight discharge from the ear contained no definite type or organism. The serous labyrinthitis could not explain all his symptoms, particularly the hiccoughs and peculiar, slight epileptiform seizures following. At this time, would have apparently some pharyngeal contractions and slight irregularity of breathing. Dizziness and nystagmus suggested a cerebellar lesion and various tumors of the cerebral pontain angle were considered. The history suggested the possibility of bronchitis, with secondary brain abscess, but careful examination of the lungs did not show at any time any changes up to this date. It seemed more probable that he had some cerebellar tumor with pressure on the pons accounting for the hiccough and the peculiar epileptiform attacks with pharyngeal and respiratory symptoms. The exaggeration of the symptoms early in March, explained on the basis of a hydrocephalus. Despite the apparent negative ear findings, there was discharge in the right ear and it was thought advisable to explore the mastoid on account of his temperature which had been present right along, though slight in degree, not going beyond 100°. He apparently was better for a few days following operation. A few days after operation, he again developed the same hiccough, dizziness, mental confusion, without more localizing symptoms or signs; it seemed more probable that we were dealing with brain tumor rather than with infection, and yet after explaining matters to the family, it seemed justifiable to investigate the sinus and adjacent dura. Apparently the sinus wall at operation was not entirely normal, but there was no thrombosis.

Right after operation, he became worse, had a steady rise in temperature, pulse and respiration. He developed signs in the right upper lobe; apparently no consolidation, but very diffuse bronchitis with numerous, peculiar, bubbling rales. With this, there was a profuse expectoration partly edema, partly purulent. This was unfortunately not examined.

Ear history:

Following a coughing spell, had pain in the right ear which increased somewhat. This was accompanied by vertigo. On the 22nd of February, had incision of the drum membrane. Follow-

* Read before the Forty-sixth Annual Meeting of the Medical Society of California.

ing this incision of the drum membrane, the symptoms did not wholly abate and had another paracentesis seven days later. Indefinite pain back of the ear and some temperature.

Examination by myself: Right ear, some discharge from this ear. No pain over the tip or on this side of the head. Bulging of the posterior, inferior wall, (which happens very seldom.) Nystagmus to the opposite side and to the same side. Some tinnitus. Hearing good. Tuning fork: Weber to the bad ear; Rinne negative in the bad ear. Seven foot hearing tube positive. Both ears reacted in the normal way to cold water. Facial intact.

My diagnosis: Acute mastoiditis requiring immediate operation.

My reasons for same were as follows:

1st—Nystagmus in the midst of a discharging ear.

2nd—Bulging of the posterior, inferior quadrant, which indicated pus retention.

3rd—Persistent temperature with a discharging ear.

The symptoms that I could not explain and thought were accidental were hiccough; at times, there was a something that simulated an epileptiform seizure. Thought this in some way due to a reflex, or possibly to a brain abscess.

Operative findings rather large, pneumatic mastoid. All cells contained pus, some under pressure. A deep cell well into the petrous portion of the temporal bone and below the bony meatus. (This cell produced the bulging from below, upwards.) The dura of the middle fossa uncovered and healthy. The sinus accidentally uncovered.

The following two days, the patient was much improved. Less vertigo, no pain, less temperature. On the third day was not so well. An increase of temperature; vertigo. Dressings changed. Fourth day, more temperature; vertigo increased. A spell of hiccough and a seizure, simulating epilepsy. At this time, I thought that probably I had injured the sinus at operation and that a nural clot was keeping up the temperature, or that in doing a dressing the patient had become infected. During the time that this was going on, he would have frequent spells of hiccough and an occasional seizure.

There were no signs of meningitis or brain abscess, with the exception of the seizures and the hiccough. Nevertheless, you will note from the temperature chart that two days prior to this, the temperature fell on two successive days to normal or below and again rose to almost 103°. So in the hope of finding something, this second operation was done.

We concluded to explore the sinus for possible infection. This was done on the 24th day of March, twelve days following the first mastoid operation.

Findings: perfectly healthy in every particular. Following this procedure, the temperature increased. All the symptoms increased, with new ones which indicated a very grave prognosis. He grew rapidly worse and died in a few days.

Now the question naturally follows—what was the cause of the man's death?

The bacteriological findings of the pus from the ear by repeated examinations, showed a mixed infection with nothing suggestive.

Blood examinations repeatedly—everything negative.

Lumbar puncture—negative findings. The pressure was not materially increased.

Brain abscess a possibility, with a decided leaning to a cerebellar tumor at this time.

At autopsy were found most remarkable scattered, grayish nodules at the cortex about one-half c. m. in diameter. These looked at first like multiple tumors, but were found to be tubercles. There was a secondary involvement wholly of the right lung by miliary tubercles. There was no obvious old focus in the lung. It was difficult even at autopsy to explain the predominant symptoms. They have to be referred to involvement of the cerebellar and pons. Cortical tuberculosis gave no signs. The spread of miliary tuberculosis of the right lung was a terminal event. The ear signs were never prominent and would at no time explain all the dizziness, hiccough, or peculiar respiratory symptoms. The operations on the mastoid and sinus were done chiefly because of the temperature, which could not well be explained by what was found on clinical examination. Internal ear intact; sinus healthy.

While this particular case was hopeless from the very beginning, it illustrates beautifully how careful one must be in the analysis of the entire case as a whole.

During the entire case, Dr. Moffitt would say at various times that he believed there was a new growth in the small brain. I contended on the other side that had he a tumor of the small brain, he should have errors in his pointing, and the nystagmus would be more pronounced and definite. Furthermore, the caloric reactions were always as they should be, and if had a tumor, it must be a brain abscess in the presence of the suppurating ear. However, he had no ear symptoms to indicate the same.

As was shown at autopsy, there were large numbers of miliary tubercles all through the cerebellum and through the entire brain, lungs, the liver, the kidneys, everywhere. In fact, this individual (apparently in perfect health), was riddled with the miliary tubercles.

The brain symptoms that he had, we easily explained. The wonder was that he did not have more and that he lived so long.

COLLOIDAL MASTIC REACTION OF CEREBROSPINAL FLUID.

ERNST ALBRECHT VICTORS, M. D., San Francisco.

Emmanuel [1] has suggested a new spinal fluid reaction in the study of nervous syphilis. Influenced by the high susceptibilities of colloidal gold to the action of certain fluid proteins and extraneous colloids, and the difficulties encumbering the

1. Emmanuel—Berliner Wochenschrift. Vol. 52, no. 30, p. 792.

preparation of a proper gold solution reagent, a simple colloidal reaction is presented.

A Mastic suspension, extensively used by Neisser and Friedman in immune colloid studies, is used as a gold substitute. This Mastic suspension when properly prepared is very sensitive to electrolyte action and is immediately precipitated by sodium chloride. It appears that there exists in normal cerebrospinal fluids a colloid inhibitive to the Mastic precipitating action of salt solution of certain concentration. On the other hand, there appears to be a precipitating antibody colloid in the fluids of syphilitics of brain and chord involvement.

THE TEST.

Stock Mastic Solution: 10 g. of gum Mastic are dissolved in 100 c.c. of absolute alcohol. Filter. This solution keeps indefinitely.

Aqueous Mastic Suspension: 1 c.c. of stock Mastic solution dissolved in 9 c.c. of absolute alcohol. Rapidly insufflate this in 40 c.c. of ordinary distilled water. The rapid addition of Mastic to water is important. If added slowly a thick, turbid emulsion is formed hardly suspectible to electrolyte action. This solution must be freshly prepared.

Salt Solution: 1.25% sodium chloride. 1 c.c. of this will immediately precipitate 1 c.c. of Mastic solution.

Cerebrospinal Fluid: Steel needle may be used. A few red cells do not interfere with the reaction. The fluid will remain unchanged in the ice-chest for a week provided that it be not contaminated.

The Reaction: Set up 5 tubes, placing 1.5 c.c. salt solution in the first tube and 1 c.c. in each of the remaining tubes. Add 0.5 c.c. spinal fluid to tube 1 and after thorough mixing transfer 1 c.c. to tube 2, continuing transfer except that the c.c. from tube 4 is discarded and no fluid enters control tube 5. 1 c.c. of the aqueous Mastic solution is now added to each tube. The spinal fluid quantities in the several tubes will be:

Tube 1—0.25 c.c.
Tube 2—0.125 c.c.
Tube 3—0.062 c.c.
Tube 4—0.031 c.c.
Tube 5—None (control)

The tubes are allowed to remain at room temperature and strongly reacting fluids may be read within a short time. Allow the tubes to stand for 12 hours before making negative readings. In tube 5 there will occur an immediate precipitation of Mastic in dense flakes with a clear supernatant fluid. With strongly reacting fluids a like precipitation takes place in all tubes.

Gradations of reactions may occur where precipitation from tube 4 to tube 1 may take place. An irregularity in reaction may be observed in that precipitation may be skipped and appear in the tube above. Such irregular results are common of colloidal reactions and also observed in the Lange test.

CLINICAL OBSERVATIONS.

Emmanuel reports the findings in 32 cases with a constantly positive reaction in 14 cases of brain and cord syphilis. In 4 of 18 instances of non-syphilitic diseases of the nervous system did a slight reaction occur.

I am presenting several series of cerebrospinal fluid studies in which the Mastic test was done together with the fluid Wassermann, Globulins, Cell count and blood Wassermann, and the Lange Colloidal Gold Test in some instances. A large series of these fluids are from the San Quentin Penitentiary, the majority of them being from non-syphilitic cases and the fluid withdrawn in spinal anesthesia. Certain fluids have been collected from Agnews State Hospital, and the remainder from my private practice.

Normal Fluids: Of 130 fluids withdrawn for spinal anaesthesia from apparently non-syphilitic individuals was the reaction negative, together with the blood and fluid Wassermann in 127 instances. One positive case gave also a weak blood and fluid Wassermann. One case of pulmonary tuberculosis with pleural effusion gave a weak Mastic precipitation. Of the entire series only one case in which it was felt that syphilis could be excluded, did a strong Mastic precipitate occur. (Table I.) Of 7 cases given a definite history of syphilitic infection with a positive blood Wassermann in some instances but without clinical manifestations of nervous involvement, was the fluid Mastic, together with other fluid tests, negative in all instances. (Table VIII.)

Non-Syphilitic Diseases of Nervous System.—In epilepsy, manic depression insanity, dementia precox, disseminated sclerosis, traumatic neurosis, neurasthenia, cerebral arterior-sclerosis and other non-specific conditions were the Mastic and Wassermann reactions constantly negative. A ventricle seepage fluid from a case negative to the usual syphilis tests gave a distinct precipitate. This fluid was turbid with leucocytes which probably affected an electrolyte action. In tuberculous meningitis was a slight precipitate also observed quite similar to the Colloidal Gold curve. (Table II.) Certain clinically doubtful cases were readily diagnosed seriologically except for a relatively high cell count in some fluids otherwise negative. (Table VII.)

Paresis, Cerebral and Cerebrospinal Syphilis.—Twenty-one of 23 paretic fluids produced a rapid and complete precipitation. One negative fluid was negative also to the blood and fluid Wassermann. It is probable that this was a fluid of the Plaut type. In one case precipitation occurred only in two tubes. (Table III.) In cerebral and cerebrospinal syphilis does the fluid likewise allow a rapid Mastic precipitate. (Tables V and VI.)

Tabes.—Fifteen tabetic fluids reacted actively in all but one instance. In this, precipitation occurred only in the last two tubes. It is of interest to note that most of these cases were under active treatment. (Table IV.)

I am presenting this test with a considerable degree of enthusiasm because it has reacted positively in a large percentage of syphilitic fluids and at times only suggestively in nonsyphilitic fluids. I am also happy to present a test strikingly simple and unencumbered by the necessity of having available elaborate apparatus or demanding faultless

precision in technic. It is my hope to stimulate more frequent spinal fluid observations in the management of syphilitics and I would suggest that a fluid cell count and Mastic test should from time to time be afforded such cases under our care. Such simple tests can be accepted as an index of nervous involvement and should be a part of routine observation.

This test of Emmanuel, as it is here given, has not the delicate differential possibilities of the Lange Gold test. I have purposely not varied the author's technic although certain modifications are suggested whereby its delicacy might be enhanced.

TABLE A.
SCHEME OF REACTIONS.

Tube	C. S. Fluid	Negative	Positive			
			x	xx	xxx	xxxx
1	0.25	0	0	0	0	x x
2	0.125	0	0	0	x	0 x
3	0.062	0	0	x	x	x x
4	0.031	0	x	x	x	x x
5	None	x	x	x	x	x x

TABLE I.
SURGICAL CASES—SPINAL ANESTHESIA.
Negative Specific History and No Clinical Manifestations (San Quentin Pen).

Case	Comment	Bl. Was	Fl. Was	mastic
127 cases	Negative history Fluid removed in spinal anesthesia	Neg	Neg	Neg
29648 (Sq.)	"	xx	x	xxxx
23033 (Sq.)	" (Tuberculosis)	—	Neg	xx
29241 (Sq.)	"	Neg	Neg	xxxx

TABLE II.
NON-SYPHILITIC DISEASES OF NERVOUS SYSTEM.

Case.	Diagnosis.	Bl. Was.	Cells.	Glob.	Gold.	Fl. Was.	Mastic
50889	Cerebral arteriosclerosis	Neg.	None	0	6 / 2	Neg	Neg
52182	Brain Tumor (?) Seepage from ventricle)	Neg	Leucocytosis	—	—	Neg	xxx
8 (Ag)	Alcoholism	—	4	0	—	Neg	Neg
28809 (SQ)	Epilepsy	—	—	—	—	Neg	Neg
28726 (SQ)	Morphinism	—	—	—	—	Neg	Neg
27563 (SQ)	Mental case	—	—	—	—	Neg	Neg
28611 (SQ)	Mental case	—	—	—	—	Neg	Neg
9 (Ag)	Manic depressive	Neg	5	0	—	Neg	Neg
12 (Ag)	Manic depressive	Neg	2	0	—	Neg	Neg
10 (Ag)	Dementia Precox	Neg	1	0	—	Neg	Neg
11 (Ag)	Dementia Precox	Neg	0	0	—	Neg	Neg
13 (Ag)	Dementia Precox	Neg	4	0	—	Neg	Neg
50832	Dis. Sclerosis	Neg	6	x	7 / 2	Neg	Neg
49763	Tub. meningitis	—	285	xxx	5.6 / 4	Neg	xx
51193	Tub. meningitis	—	114	xxx	5.6.7 / 3	Neg	x
51115	Convulsions (?)	—	—	0	—	Neg	Neg
50836	Traumatic Neurosis	—	1	0	—	Neg	Neg
16 (Ag)	Traumatic Neurosis	—	9	x	—	Neg	Neg
52884	Neurasthenia	Neg	2	0	—	Neg	Neg
51970	Neurasthenia	—	2	0	—	Neg	Neg
50722	Neurasthenia	—	0	0	—	Neg	Neg
51746	Hydrocephalus	—	3	0	—	Neg	Neg

TABLE III.
PARESIS.

Case.		Bl. Was.	Cells.	Glob.	Gold.	Fl. Was.	Mastic.
17	(Ag)	Neg	65	xx	—	Neg	Neg
18	(Ag)	xxx	37	xx	—	x	xxxx
19	(Ag)	—	19	xx	—	Neg	xxxx
20	(Ag)	xxx	131	xxx	—	xxx	xxxx
21	(Ag)	xx	18	xx	—	xxx	xxxx
22	(Ag)	xxx	—	—	—	xxx	xxxx
23	(Ag)	xxx	31	xxx	—	xxx	xxxx
24	(Ag)	—	97	xxx	—	x	xxxx
25	(Ag)	xxx	14	xxx	—	xxx	xxxx
26	(Ag)	Neg	25	xxx	—	xxx	xx
51334		Neg	30	x	1.2.3.4.5 / 5	xxx	xxxx
51369		—	64	xx	2.3.4 / 5	xxx	xxxx
51428		—	13	xx	3 / 5	x	xxxx
51492		xxx	82	xxx	1.2.3.6 / 5	xxx	xxxx
51552		xxx	21	x	5 / 5	x	xxxx
27	(Ag)	xxx	16	xxx	1.2.3.4 / 5	Neg	xxxx
32	(Ag)	x	18	—	—	x	xxxx
33	(Ag)	xxx	25	—	—	xxx	xxxx
51800		xx	16	x	—	xxx	xxxx
51876		xxx	—	—	—	xxx	xxxx
52134		xxx	43	x	—	Neg	xxxx
52418		xxx	66	xx	—	xx	xxxx
52525		—	22	xxx	—	xxx	xxxx

TABLE IV.
TABES.

Case	Comment	Bl. Was	Cells	Glob	Gold	Fl. Was	Mastic
27827 (SQ)	Chancre 1914 Salvarsan & Hg Intraspinous Hg	xxx	—	—	1, 2, 3, 4, 5 / 5	xxx	xxxx
51450	—	—	60	xx	3, 4, 5 / 5	xxx	xxxx
52027	—	x	76	xxx	—	x	xx0x
30144 (SQ)	Chancre 1901 Several Swift-Ellis	—	—	—	—	Neg	xxxx
52206	Several Swift-Ellis	—	7	x	—	xxx	xxxx
14 (Ag)	—	—	—	—	—	xx	xx0x
15 (Ag)	"Swift-Ellis"	—	—	—	—	x	xx
Wells (SQ)	Hg intraspinous	—	—	—	—	xxx	xxxx
Love (SQ)	" "	—	—	—	—	xxx	xxxx
51491	—	x	28	0	—	Neg	xxx
52252	Neg. history Sluggish pupils + Romb. — knee	Neg	32	xxx	3, 4 / 4	xx	xxxx
30144	Chancre 1901 Swift-Ellis	—	—	—	—	Neg	xxxx
30238 (SQ)	Chancre 1890 Hot Springs, Rubs, Hg intravenous	—	—	—	—	xx	xxxx
52518	—	—	76	xxx	—	x	xxxx
53601	—	x	53	x	—	xx	xxxx

TABLE V.
CEREBRAL SYPHILIS.

Case	Comment	Bl. Was	Cells	Glob	Fl. Was	Mastic
50837	Gumma (?)	xxx	2	0	Neg	xx0x
51286	—	—	14	x	x	xxxx
52855	—	—	164	0	xxx	xxxx

TABLE VI.
CEREBROSPINAL SYPHILIS.

Case	Comment	Bl. Was	Cells	Glob	Fl. Was	Mastic
51030	—	xxx	210	xxx	xxx	xxxx
51292	—	xx	46	x	x	xxxx
51781	—	xxx	600	xx	xxx	xxxx
34 (SQ)	—	xxx	—	—	xxx	xxxx

TABLE VII
DOUBTFUL AND UNDIAGNOSED CASES.

Case	Comment	Bl. Was	Cells	Glob	Gold	Fl. Was	Mastic
27 (Ag)	Paresis (?)	Neg	7	0	—	Neg	Neg
28 (Ag)	Paresis (?)	—	4	0	—	Neg	Neg
29 (Ag)	Paresis (?) sluggish pupil	—	1	0	—	Neg	Neg
30 (Ag)	Paresis (?)	Neg	18	x	—	Neg	Neg
31 (Ag)	Paresis (?) confused and talkative	Neg	23	x	—	Neg	Neg
50842	Congenital lues (?) Blindness	Neg	4	0	7, 8 / 3	Neg	Neg
51052	Tabes (?)	Neg	10	xx	4 / 3	Neg	xxx
51127	No diagnosis	—	26	xxx	6 / 3	Neg	Neg
51318	No diagnosis	—	184	0	—	xx	Neg
52107	Tabes (?) + history pupils	Neg	18	0	—	Neg	xxxx

TABLE VIII.
CASES WITH DEFINITE HISTORY OF INFECTION. NEGATIVE FLUID.

Case	Comment	Bl. Was	Cells	Glob	Fl. Was	Mastic
51137	30 years ago (chancre, throat, rash) Rigorous Hg therapy No clinical evidences	Neg	6	0	Neg	Neg
29903 (SQ)	Chancre 1916 Rash Hg intravenous	—	—	—	Neg	Neg
29304 (SQ)	Chancre 1912	—	—	—	Neg	Neg
51824	Chancre 1915 Was. xxx Meningitis in secondaries. Headaches now. Reflexes OK	Neg	3	0	Neg	Neg
51407	Chancre 1900 Local treatment only	xxx	4	0	Neg	Neg
52228	Chancre 20 years Previous Was. pos. Joints	Neg	0	0	Neg	Neg
52714	Iritis—previous Was pos.	xx	11	x	Neg	Neg

TABLE IX.
COMPARATIVE FINDINGS IN PARESIS AND TABES.

	Bl. Was	Cells	Glob	Fl. Was	Mastic
Paresis—(Series of 23 cases)	82% Positive	13 — 40 av. 131	79% Positive	83% Positive	91% Positive
Tabes—(Series of 15 cases)	20% Positive	7 — 48 av. 76	59% Positive	80% Positive	93% Positive

THE CARE OF THE FUNCTIONING BREAST.*

FRANK C. AINLEY, B. S., M. D., F. A. C. S.,
Los Angeles, California.

It is generally admitted that the natural food for the human infant is human milk, that breast fed babies are more likely to live than the artificially fed, and that as a class they are healthier, more vigorous, and more resistant.

Few appreciate, however, how much greater the mortality is in artificially fed than in breast fed infants. Statistics show that 75 to 90 per cent. of all deaths during the first year are in artificially fed children. The younger the baby the higher the mortality. About one half of all deaths under one year occur in the first two months of life.

The mortality of babies below one year, is for exclusively breast fed 6.98 per cent., for those brought up on a mixture of breast milk and artificial food 9.87 per cent., for those fed artificially 19.75 per cent. This means that 13 out of every hundred of these babies die, during the first year, for the lack of maternal nursing.

The responsibility for these deaths lies too frequently with the doctor. The main reason why women do not nurse their babies, is that they do not understand its importance, and this to a considerable extent, is due to the fact that the doctor does not give proper instructions and careful supervision of details. The best artificial food is never equal to good mother's milk.

It is said that in Greenland and among the Esquimos, artificial feeding is practically unknown, and that in Japan breast feeding is the rule. In other countries the proportion of breast fed babies is much smaller. Among dispensary patients and those of the tenement districts of American cities, it is estimated that 60 to 80 per cent. of the women attempt to nurse their children. Among the so called higher class seen in private practice, statistics available would indicate a very much lower percentage.

Dr. L. Emmett Holt, in his text book, is responsible for the following statement:

"Among the well-to-do classes in New York and the suburbs, of those who have earnestly and intelligently attempted to nurse, not more than 25 per cent., in my experience, have been able to continue satisfactorily for as long as three months. An intellectual city mother who is able to nurse her child successfully for the entire first year is almost a phenomenon. Among the poorer classes in our cities a marked decline in nursing ability is also seen, although not yet to the same degree as in the higher social scale."

Unfortunately, in the text books of our foremost American obstetrical teachers, a similar discouraging attitude is assumed.

I have always been much impressed by the statements regarding the feeding of infants during the Siege of Paris (1870-1871). It is said that on account of the absence of cow's milk, the women, under trying conditions, were compelled to nurse their babies, and the infant mortality, under a year, fell from 33 to 7 per cent.

It is probably fair to say that all women who do not nurse their babies, fall into one of two classes, those who are unable, and those who are unwilling. Among the working and poorer classes, one must admit that sometimes, for financial reasons, a mother may find it impossible to give herself up to that effort, but it is among the well-to-do mothers that one finds the lowest percentage of breast fed babies.

I have for some time made a special effort to increase the percentage of breast fed babies among my patients, and I am fully convinced that the percentage of those who are truly physically unable is extremely small, and that a very large proportion can do so if they are willing to make the necessary effort.

Preparations for nursing should begin early in pregnancy. A careful physical examination, correction of abnormalities—such as anaemia, constipation, etc., regulation of diet, and the stimulation of normal elimination, especially of the skin, are important. The patient should be assured from the beginning of her ability to nurse her baby satisfactorily. Retracted nipples should be drawn out; and during the last month or longer, the nipples should be scrubbed each night vigorously with castile soap and treated freely with lanolin. Lanolin makes the skin soft and pliable, and in my hands has given much better results than preparations containing alcohol, which though they harden the skin, tend at times, to favor cracking when the baby nurses.

About twelve hours after delivery the child should be put to the breast. Nursings from the beginning should be regular and as thorough as possible. The infrequent schedule commonly recommended for the first few days is wrong, for it is the regular, frequent, thorough stimulation, which assures a good milk supply. The child should nurse every three hours during the day and every four hours during the night from the beginning. The two hour schedule is unnecessarily strenuous on the mother, and the four hour schedule, in my experience, does not sufficiently stimulate the breasts.

After the mother's bowels have moved well, she may be allowed any wholesome food which agrees with her. Green vegetables and acid fruits do not as a rule cause any trouble, and I always allow them freely, until some supposed bad effect is noted. Plenty of wholesome food, and a normal amount of fluids are the essentials.

There is no such thing as complete absence of milk if the baby nurses. The milk always comes in, usually the third to the fifth day, but on one occasion a sufficient milk supply was obtained only after three weeks' effort.

Much harm is frequently done, by meddlesome treatment when the breasts first become engorged. At this time it is only necessary to keep the nipples clean, avoid bruising, see that the breasts are periodically, thoroughly emptied by the baby, or if the baby does not nurse well, by the use of a breast pump, in order that an abundant milk sup-

* Read before the Forty-sixth Annual Meeting of the Medical Society of the State of California, Coronado, April 1917.

ply may be assured. If the breasts are heavy and pendulous, a loose supporting binder is permissible, but pressure bandages do no good, and may be injurious. Massage may lead to bruising and infection, ointments are of very questionable value, salts or active purgatives are contra-indicated, and to cut down the liquid is futile or harmful. I have never seen a hard engorged breast at this stage, lead to abscess formation except in cases where infection and bruising have been introduced by meddlesome attention. Nature has a wonderful power to take care of any excess of milk when given the opportunity unhindered.

When the amount of milk is insufficient it is wise to eliminate all unnecessary wasting of nerve energy, visitors, etc. It is customary also to force liquids and food. Many galactogogues have been recommended, but I doubt that they have much, if any value over good wholesome food. Provided the patient is getting a normal amount of rest, fresh air, food and liquids, the one thing which will do the most to bring up the milk supply is regular, periodic, thorough emptying of the breasts by natural methods if possible, by artificial means if necessary. In other words the child should be made to empty the breast, and when this fails the breast should be pumped after the child has nursed. Stimulation of the breasts after they are empty will make more milk come later. A hungry baby in these cases is a desirable thing, and for this reason it is always, when possible, wise to avoid any artificial feeding, either before or after nursing, and only in exceptional cases is it wise to allow the child to nurse both breasts at one feeding.

One of the most valuable and simplest procedures we have is the weighing before and after nursing. In this way we learn exactly the amount the child is getting. When the amount gained in the usual time is insufficient, the baby may be put back to the breast for a supplementary nursing of a certain number of minutes. This has the advantage of giving the child more food and giving the breasts additional stimulation. If the child is premature, the additional stimulation may be obtained by the use of a breast pump.

The point which is usually overlooked is that moderate hunger is a good thing, for it is the hunger that causes the child to stimulate the breast and automatically increase the food supply. To give artificial food satisfies the hunger, prevents the extra stimulation, and further diminishes the milk supply. Most babies are weaned about two months after the first bottle of artificial food is given, although all of us can cite exceptional cases.

It is commonly taught that at birth a baby's stomach has a capacity of one ounce, but by weighing before and after nursing, we learn that an average sized normal baby will during the second week take anywhere up to six ounces at a feeding. The average amount taken in the second week by a baby, that is gaining well, is about three to three and a half ounces at a feeding. The amount varies at different times of the day, and the total amount varies on different days, but the important thing to remember is that although under certain disturbing conditions the milk supply may be diminished on some days, the supply will always be restored if we persist in the nursing, stick to the schedule, and avoid all artificial food.

I have many times been told of cases in which the milk suddenly completely disappeared and did not return, but I have never seen such a case.

When a baby is on a three-hour schedule, a so called "matinee bottle" should not be given, the breasts require the stimulation in order to maintain the supply.

Many obstetricians advise cutting out one or two night-feedings as early as the child will sleep past them. This is a mistake, although it is desirable that the patient have unbroken sleep when possible, and some babies will sleep well all night. I find that the milk supply is almost always materially diminished a very few weeks after omitting one of the night nursings, and for this reason I urge all of my patients to continue the four hour schedule during the night until at least the end of the fourth month.

In my practice, colic is an unusual condition, and as a rule by weighing the baby before and after nursing we find the cause for crying. A breast fed baby that is gaining four or more ounces a week and whose bowels are moving one or more times daily rarely has a severe illness, and provided the bowels move once a day or oftener, the color and consistency or the presence of mucus or curds, is of little importance.

The routine analysis of a single specimen of mother's milk is of practically no value and I have long since ceased making these examinations.

Contra-indications to nursing in a woman who has borne a healthy child, are relatively few. Those generally recognized, are Acute Pulmonary Tuberculosis, Healed Tuberculosis, Insanity, Epilepsy, certain chronic wasting diseases, severe haemorrhages, and Chronic Nephritis.

The Syphilitic mother should be given treatment and should be compelled to nurse her child, as both the patient and infant in this way profit by the treatment.

In cases of Eclampsia, after the patient has recovered from the acute attack and elimination has been thoroughly established, it is my rule to have the patient nurse the baby, and I have not seen bad results. It is, however, important to establish the elimination thoroughly before putting the child to the breast.

Although a definite indication may arise for weaning a baby, such as Lactational Psychosis, Acute Hyper-thyroidism, Acute Miliary Tuberculosis, or other relatively rare conditions, it is quite common to find that babies have been weaned during the early months quite unnecessarily, or for very slight causes, such as crying, constipation, etc.

Menstruation is not sufficient cause for weaning a baby, slight changes are produced in the milk particularly a dimunition in the amount, but contrary to common belief the greater majority of women normally begin menstruating during lactation. I have always urged my patients to continue nursing and have not seen serious bad effects. It

is a mistake to give a temporary supplementary bottle.

Tonsilitis, acute colds, and the usual infectious diseases, are not as a rule indications for weaning the infant, because the infant through the milk from the infected mother receives anti-bodies which protect it against the disease.

The nipples should be carefully protected against handling and soiling and they should be cleansed with boric solution before and after each nursing. When fissures appear they should be treated with mild healing antiseptics. The nursing should not be discontinued, although at times a nipple-shield may be used as a temporary relief from the biting of the infant. The breast is rarely emptied so efficiently through the nipple-shield, and its use should be discontinued as soon as possible.

When a lymphangitis develops, the patient should be confined to bed, ice applied constantly to the breast, water forced, and the breast thoroughly emptied at the regular intervals by nursing. To begin treatment early is of the utmost importance. Heat should not be applied and massage is bad. I have never seen a breast abscess develop in a case where the above advice was followed and I have never seen bad effects in an infant from nursing an infected breast treated as above.

To prevent establishment of milk supply or to dry up the supply when it has once become established, it is only necessary to protect the breasts against brusing and contamination, and leave them absolutely alone. It is unnecessary to restrict liquids or give cathartics; pressure binders are unnecessary; heat, massage and ointments are injurious. A loose support may add to the patient's comfort, and the temporary engorgement may justify a few doses of Codein to relieve the pain. The patient should be cautioned against rubbing or bruising the breasts. To massage or pump the breast is dangerous and prolongs the discomfort. If the breasts are protected against bruising and infection, the discomfort will be of short duration, and I have never seen abscess formation where this treatment has been followed absolutely.

To gain some idea of the result obtained I have analyzed 100 consecutive cases, excluding only those cases which dropped out of sight at the end of the puerperium. Most of these cases had returned to their homes in other cities, and all of them were nursing their babies when last seen.

98 nursed three months or longer, and 86 of these were still exclusively breast fed.

89 nursed five months or longer, and 77 of these were still exclusively breast fed.

75 nursed seven months or longer, and 54 of these were still exclusively breast fed.

56 nursed nine months or longer, and 32 of these were still exclusively breast fed.

So far as I am able to learn, two babies died during the first year, one at six and a half months of broncho-pneumonia while being fed exclusively artificially, the other at five months of whooping cough and pneumonia while exclusively breast fed.

It is also interesting to note that the two babies weaned before the end of three months were weaned without my advice.

"United States Life Tablets," 1910.
Morse and Talbot, "Diseases of Nutrition and Infant Feeding," 1915.
L. Emmett Holt, "The Diseases of Infancy and Childhood," 1906.
J. Whitridge Williams, "Obstetrics," 1912.
Edwin Bradford Cragin, "Obstetrics," 1916.
Abraham Jacobe, "The Best Means of Combating Infant Mortality," J. A. M. A., June 8, 1912.

GASTROENTEROSTOMY.*

(100 cases studied postoperatively.)

By C. W. LIPPMAN, M. D., San Francisco.

In watching a series of stomachs two to eight years after operation it has been my impression that the results of gastroenterostomy are poor in a large per cent. of the cases, except in the cases of true pylorostenosis, where the gastroenterostomy acts in a definite drainage capacity.

Originally the wonderful immediate effect of the gastroenterostomy on the pain and other ulcer symptoms was ascribed to drainage but as fluoroscopy came into its own it was noticed that a large part of the food persisted in traveling through the pylorus no matter where the surgeon put the hole in the stomach, and let me say here, that where the surgeon puts his opening is not where the opening stays. Within the last week I had occasion to re-examine two gastroenterostomies, one two years and the other four years old. Both openings were put originally at the most dependent part of the stomach. One has wandered to the right till it empties in spurts with each contraction of the antrum; the other has been drawn up to the vertical part of the greater curvature, food wandering impartially both through the hole, as if it were a drainage pipe, and through the pylorus.

Later the surgeon explained his good results by the regurgitation of alkaline fluid neutralizing the gastric juice. Yet within the last few months the Mayo Clinic reports 11 cases of gastroenterostomy for duodenal ulcer, all of which had anacid stomachs. As a matter of facts, we haven't any idea why gastroenterostomy cures peripyloric ulcer. Finney gets the same results or better with pyloroplastics. If you ask the surgeon why he does a gastroenterostomy, he tries to explain but cannot. He always falls back upon the fact that gastroenterostomies do work. That is correct—but in my experience this immediate good effect is counteracted by a mortality within three months of approximately eight per cent. This figure is for the surgery of a great number of men who have had surgical services for years with large practical experience. This eight per cent. mortality compares very favorably with Coffey's (of Portland) seven per cent. mortality in one hundred cases of his own and Peck's (of Roosevelt Hospital, N. Y.) with eight per cent. in seventy-one cases. Those men, who have only two per cent. mortality—the mortality of accident, work only on selected cases. The cases which I see in clinic are very often moribund at operation. Among the bad results of gastroenterostomy in the 100 cases which I analyzed before giving this paper, I had three

* Delivered at S. F. County Medical Society, April, 1917.

recurrent ulcers operated upon—one gastrojejunal and two recurrent in the stomach proper; six cases re-operaed upon for adhesions, five more in which I ascribed the recurrent symptoms of gas and acute discomfort after meals to adhesions, and three cases in which the stoma remained too large or too relaxed. These latter cases suffered from gas and distention immediately after eating. This was easily explained when you watched the bismuth drop through the gastroenterostomy opening, distending the loop of gut, a pint of buttermilk leaving the stomach in less than twenty minutes. One of these cases also had the symptom described elsewhere in the literature of diarrhoea with undigested food appearing in the stools. A finely divided diet relieved him. Another 12 cases were not completely relieved of their symptoms, being unable to take full diet without hyperacidity, pyrosis and gas after eating. This makes 29 cases with poor after-results, 8 fatal cases, 12 cases which I could not follow in this series, leaving 51 cases with good results. Among the good results are 12 cases of pylorostenosis which, separated out, only gives me 39 cases of simple peptic ulcer with good results against 37 cases with poor results. Of the fatal cases, one died of hemorrhage within 12 hours of operation, two of postoperative shock, one of peritonitis and four of pneumonia. These were not all truly chargeable to the operation, as four of the cases were practically moribund at operation. They were, of course, poor subjects for surgery. Incidentally four of the poor results of gastroenterostomy were on cases where the ulcer should have been there but could not be found at operation. I believe with the Mayos that you should not do a gastroenterostomy unless you can show the ulcer to bystanders. My figures of 37 per cent. bad results in 100 cases are uncannily close to such figures in the literature as Clairmont's (von Eiselberg's clinic) of 62 per cent. good results in peripyloric ulcers, and Bourne's (1913) 38 per cent. bad results. Martin and Carroll reported 45 per cent. recurrence of symptoms. No statistics are accurate—each man must judge from his own experience. I feel personally that in every case of ulcer, whether peripyloric or distal from the pylorus, resection and not gastroenterostomy is the method of choice. Wherever possible cut out the ulcer, because if we have complications and have to go back into the belly the stomach is much easier to work with than when it has a gastroenterostomy loop and a mass of adhesions tied to it. Of course, the higher mortality of resection is always mentioned, but, in my experience, resection of simple ulcer in the hands of competent men has had no greater mortality than gastroenterostomy. The real reason for the greater mortality of resection in ulcer is that most surgeons only resect large ulcers suspected of being carcinomatous and, of course, a resection of a large part of the stomach gives a greater mortality than a simple gastroenterostomy operation. Besides, we know from Finney, who does but few gastroenterostomies, that his results are just as good or better than the best claimed by the men who do routine gastroenterostomies. No operation should be a routine: every case should be studied both on the operating table and before it goes on the operating table, and the best method for that particular patient applied. Only in this way will our per cent. of operative results become better. Personally I prefer to see the cutting out of anteriorly situated duodenal ulcers when possible: incising and sewing over posteriorly situated duodenal ulcers; ditto for pyloric ulcers with pyloroplasty when necessary. Ulcers of the lesser curvature when of any size should all be excised, as large ulcers are usually carcinomatous (roughly when about the size of a dollar). I prefer to see a sleeve resection as I have seen no disturbances of motility after sleeve resections whereas in triangular resections I have two cases with delayed emptying. Just why this occurs, no one knows, though there is being done much experimental work along this line, both on humans and animals. The most recent report is that of Stewart and Barber. I see no need for the gastroenterostomy following unless the stomach be too small for function. If there be not enough left for good function I prefer the Polya operation to the other forms of gastroenteric anastomosis.

MINERAL SPRINGS AND SOME OF THEIR INTERNAL USES.

By R. H. HUNT, M. D., Bartlett Springs, California.

From time immemorial the use of mineral waters has stood apart as a definite method of treatment. It has never at any one time had very great support from the medical profession as a whole, yet it has held a unique place as a therapeutic agent. We cannot ignore the fact that medicinal springs have at all times and in all ages enjoyed a large measure of the faith and confidence of mankind and at the present time multitudes every year are finding relief from them. Many have advanced the theory that it was the water only that counted in the results obtained, and that the particular qualities of the spring were negligible. Let full value be freely granted to the watery element. Are all the effects thus accounted for? It is evident that no simple theory is enough to explain the action of the mineral spring waters. Interpretations as to their action have been many and various; with the advance of science the mystic powers of the mineral springs to cast out devils, to eliminate unhealthy humors have been discarded with the theories themselves; the explanation that attributed every property of mineral waters to their ascertained chemical construction has in its turn proved misleading. Their composition is still in part unknown to us; chemical data do not reveal to us the real grouping of the elements. We do not know their influence one upon the other, nor their intimate action in the body. Too much has been claimed for them; they have been used as the main or sole treatment, thereby falling into disrepute, whereas the medicinal spring water today is only an auxiliary or supplemental treatment. To some physicians the recommendation of a mineral water treatment is objectionable be-

cause of the ridiculous and improbable claims set forth for it; but the same may be said of many drugs, many kinds of exercises, foods, etc., yet none of us are so disgusted with these mendacious claims that we fail to recognize the good in them or cease to use them.

If, as experience has shown, the analysis of mineral waters gives too vague an idea of the indications for the water, a better understanding may be obtained by grouping the medicinal springs into classes, not with the idea of making every spring in the class agree as to the therapeutic uses, but to see if we may reasonably expect similarity from waters of the same chemical type. A modification to Haywood's classification of mineral waters gives groups easy to handle—easier than analyses. After more attention is given to this scheme we will be in a position to demand a certain result from a certain spring used in a certain way.

The classification referred to is briefly as follows: A—Thermal. B—Non-thermal. I.—Hypotonic. II.—Isotonic. III.—Hypertonic. 1—Alkaline. 2—Alkaline-saline. 3—Saline. 4—Acid.

It is not feasible to give, in one paper, the indications for all of these types of waters, but I would like to show how this classification could be used in order to obtain them.

A. and B. Enough work has been done on the first group to know the variations that must be expected from hot and cold waters. Thermal waters more readily fluidize the contents of the stomach and intestinal canal than do the cold waters; they augment the secretions and are more rapidly absorbed, but, having a tendency to relax the gastro-intestinal tract, it is not wise to take large amounts for a prolonged period. There is also a tendency to increase the pulse rate and lower the blood pressure so that hot water is contraindicated in diseases of the heart with weak compensation. The cold mineral waters predominate; they have a more tonic effect and in most instances are more agreeable but should not be advised in gastric irritation, colic or dysentery. But, as with warm waters, their use depends upon their strength, whether hypotonic (having a lower osmotic pressure than the blood—having less than 6500 parts per million of mineral matter), or isotonic (between 6500 and 8500 parts per million), or hypertonic (having more than 8500 parts per million). This division is an arbitrary one made to give us some standard by which we can classify the strength of waters, and it must be realized, as in all artificial divisions, that there will be a certain amount of overlapping.

I. The hypotonic waters have a mild gentle effect and may be used where there is need for quantity to assist in elimination more than vigorous chemical action. It gives the best results in acute, subacute and severe cases that would not stand irritation and drastic treatment.

II. The isotonic waters come within the group of heavily mineralized waters and on this account restrict their use to smaller quantities because their action is more vigorous. Here the chemical composition gives the indications.

III. The hypertonic waters are still more heavily mineralized and not used internally to any great extent, many times having to be diluted because of their great strength and disagreeable taste. On account of their high osmotic pressure they act physically, drawing the watery parts from the tissues with which they come in contact, and are among the drastic purgative waters. The chemical composition of a water of this class has less influence because it is so promptly eliminated through the intestines. These waters are contraindicated in acute and subacute conditions and in diseases of the kidneys where irritation has to be guarded against.

Now we should attribute the properties of the above characteristics to the chemical type of the water under consideration.

Take for example 3—Saline. Von Noorden in vol. V of "Diseases of Metabolism and Nutrition" gives us an exposition of the effects of saline waters. In gastric catarrh with subacidity, the use of the saline waters lead to an active and permanent increase in the production of hydrochloric acid. That a remedy should work in cases diametrically opposite is one of the things we sometimes happen on in medicine, for in a case of nervous dyspepsia and hyperacidity decrease in the production and an amelioration of the subjective symptoms were obtained. To quote from von Noorden: "To argue, as is done, that because simple saline waters are beneficial in subacidity therefore they are contraindicated in hyperacidity, is a form of cleverness which rejects facts and opposes the free growth of knowledge."

Where the salinity is marked by the chloride radical an increase in the appetite may be expected, with a general stimulating effect along the whole gastro-intestinal tract increasing the flow of the intestinal fluids, pancreatic juices, bile and gastric juice, these being an aid in the process of digestion. Where the saline water is marked by the sulphate radical a diuretic action results, together with a laxative, cathartic and purgative effect depending upon the concentration of the water. The heavily mineralized waters act by promoting a process of endosmosis, extracting water from the blood and increasing the watery elements of the intestinal secretions. These waters are effective in eliminating from the system the various toxines due to the chronic infections—rheumatism and gout—also in eliminating the chemical poisons, lead, mercury and alcohol.

In this class of mineral waters the contraindications are important from the fact that the harmful results are dangerous to life. All types of saline waters—hot, cold, hypotonic, isotonic, and hypertonic (the concentrated ones in particular)—should be cautiously used, ever bearing in mind the sodium and chlorine ions they always contain, and are contraindicated in all affections of the kidneys, especially types of nephritis where edema is present. Widal and others, from their work with the retention of sodium chloride, have pointed

out the danger. We should therefore be ever watchful and not allow a patient to seek to augment our treatment by visiting a spring where there are saline waters. The epileptic and the highly nervous patients are prone to have trouble when they are ingesting the saline waters, particularly the hypertonic and isotonic waters. In the Jour. A. M. A., Nov. 27, 1909, the papers of Victor C. Vaughn and John H. Musser set forth and discuss at length the retention of sodium chloride. Strong hypertonic saline waters are irritating to the intestinal mucosa and may produce inflammatory changes.

This is a cursory discussion of the effects expected from the saline waters, that is, when a proper regime is established and supervised and not when taken indiscriminately and haphazardly as is done when the health seeker picks a spring without medical advice. In the same way this classification may be used to determine the indications for the other types of waters, 1—Alkaline, 2—Alkaline-saline, 4—Acid (some authorities call this division "Iron" due to the fact that the acid waters contain large amounts of iron which is of more importance than free acids).

I realize the present conservatism of our profession regarding health-spring-lore, but I entertain a little hope that what I have said will arouse an interest in the subject, and I am confident that no open-minded physician can look into it fairly, as he would into any other therapeutic method, without being persuaded that there are possibilities for good which our profession should no longer neglect.

REPORT OF A CASE OF CHARCOT JOINT OF THE SPINE.

By W. H. CAMPBELL, M. D., Santa Barbara.

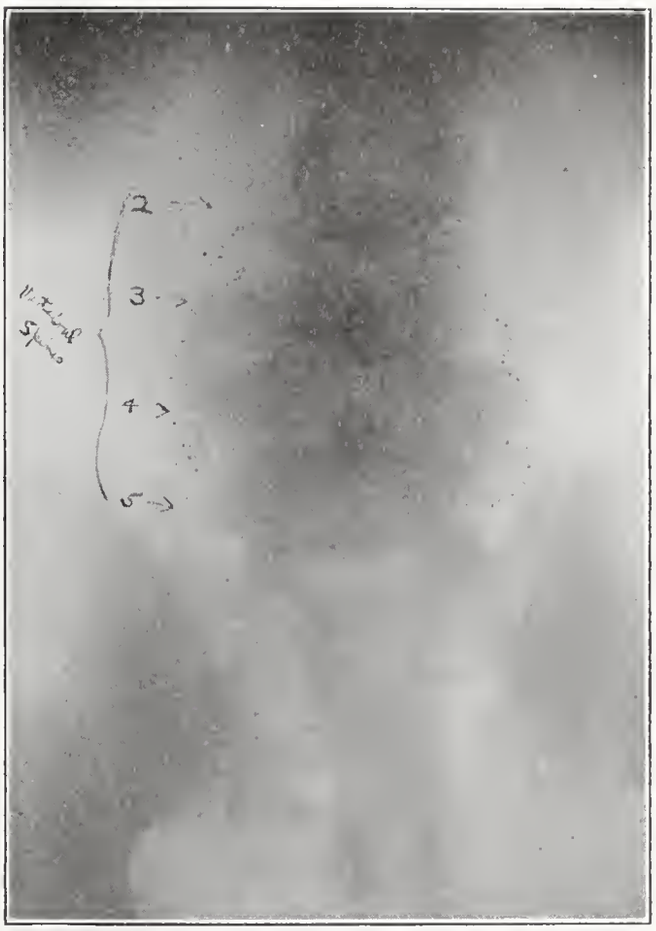
Because of the rarity of this lesion of the spine it would seem to be of some value to report this case. Furthermore this condition may give what are apparently the typical lightning pains of tabes with no symptoms pointing to the local lesion of the spine.

A very good review of the literature on this spinal condition was presented by S. Fosdick Jones in the American Journal of Orthopedic Surgery for February, 1913. The lesion is one that may involve as many as ten vertebrae. Like Charcot joints elsewhere, the process is one of rarefication with secondary proliferation. The more rapid the former change the less there is of the latter, and vice versa. There may be complete destruction of the vertebral bodies, while points of rarefication to one side of the midline may lead to scolioses. The marked exostoses lateral to the spine as seen in this case are typical. The history follows:

The patient, a man aged fifty, with the characteristic symptoms and signs of a fully developed tabes dorsalis, had what was no doubt the initial lesion of syphilis in 1897. He was given local treatment only, as the lesions were multiple and thought to be chancroidal. In 1903 the patient had his first leg pain. For seven years there were attacks of lightning pains of two or three days' duration coming at intervals of about three months. In 1911 the condition was pronounced tabes. The Wassermann reaction was negative and has always been so. A dose of salvarsan given at this time gave freedom from pain until 1914.

In December, 1914, the patient developed what was diagnosed a Charcot joint of the right ankle. Intensive mercury and salvarsan treatment was given for a year, at the end of which time the joint subsided to its condition when last seen. The ankle joint was slightly thickened with 20 per cent. limitation of motion and a good deal of painless crepitation. Pain, except that due to ligament strain, had not been a symptom in this instance. The trouble was one of mechanical disability.

During 1915 the suffering from leg pain was severe. Specific treatment did not relieve this to any extent. The patient came west for the change



of climate, but in spite of further doses of salvarsan and arseno-benzol given here, his pains became worse. They were especially bad on days when he had been up for some time. He used crutches to steady himself when walking. On one occasion it was noticed that the patient, when walking, bent forward. On investigating it was found that he never walked erect and that he could not stand so. A very noticeable kyphos, most prominent at the fourth lumbar spine, was present. When the patient bent his spine in any direction there was clearly audible crepitus and at times sharp pains in the thighs and legs. This was especially so when bending to the left. There was never the slightest pain in the region of the kyphos.

On close questioning it developed that the patient first noticed a "stiffness" in his back in the early autumn of 1915 after a long hospital confinement. It was difficult for him to reach his bed light, the sensation being one of "giving way" in his back.

A back brace relieved nine-tenths of the pain. The patient gained rapidly in weight and strength and after two months looked very well. He walked without his crutches. With no warning whatever he suddenly died, presumably from some cerebral lesion. I was away at the time and the pathological specimen was not obtained. The ac-

companying radiograph, showing beginning exostoses opposite the second and fifth vertebrae and marked involvement of the second and third, is self-explanatory. A few points have been marked on the margins of the exostoses to more clearly outline them in the print.

FOREIGN BODY LODGED IN LUNG AND REMOVED AFTER ELEVEN YEARS BY BRONCHOSCOPY.*

By PAUL R. WALTERS, Dinuba.

The case which I have for presentation this evening is most interesting. The boy you see here, has been suffering for the past eleven years from a foreign body lodged in the right lung. This young man has been under the care of a great many physicians, with various diagnoses, and finally, after having spent a number of months in a tubercular hospital, a correct diagnosis was made and, with the proper treatment, the foreign body was removed. He is well on the road to a permanent recovery. I am reciting his own statements of the beginning of his trouble:

"About the time I was nine years of age, I was sitting at the dinner table one day, eating soup, and I swallowed a bone, which choked me as it was passing down the throat. There followed a violent attack of coughing, which caused me to vomit. There was some blood in the matter that I vomited, and I thought the bone came up. After this I was troubled with a hacking cough, which came on very shortly after I swallowed this bone, from which I have never been free. There were times when there would be a severe attack of coughing, then I would go for a long period without coughing. My parents consulted our family physician about this cough, who said that I was probably tubercular. I took treatment, but did not get well. I then was taken to Hanford, a nearby town, and my parents consulted a physician there, who gave me electric treatments and medicine for the cough. I was under treatment with this physician for three months continuously, then at various times for a year or more. I went to school, and my condition was about the same. Then I discontinued school and went to the mountains, with some improvement. At this time my parents consulted an osteopath physician in another nearby town, who said that my second vertebra was out of place, but upon several attempts he evidently did not succeed in getting it back, because my cough continued. During this time there were attacks of blood spitting, with the continued cough and expectoration, and a foul breath. I was then taken to San Francisco, and remained in one of the hospitals there for the period of one week, under observation of one of the most prominent physicians in San Francisco. At this time there was some medical convention going on in San Francisco, and my physician had several of these visiting physicians see me with him. At the consultation it was decided by these doctors and my physician in San Francisco that there were two of my ribs out of place, pressing upon my lungs, and my physician in San Francisco said that he thought it would be necessary to operate upon me to remove these ribs. My father was willing to have the operation performed, provided the physician could at least give him a fair prognosis as to my recovery. This, however, the physician would not do, and my father refused to have my ribs removed. There had been a number of X-ray plates made up to this time, but they showed absolutely nothing which would aid in diagnosing my trouble. I next consulted a nose and throat specialist, who cauterized the throat and removed some nasal obstruction, and said that I was suffering from chronic catarrh of the nose and throat. I took some local nose and throat treatments, with very little improvement. Another local physician was then consulted, who gave my father a very bad outlook of my future, stating that I would live but a few months, having lost one lung entirely and half of the other lung. From this physician I next consulted a Chinese herb doctor and took his medicine, with no results. After this I again went into the mountains and then to the seashore. There were periods of improvement during this time. I again attempted school. There were a number of physicians, the names of whom I do not remember, who saw me at various times, all making a diagnosis of tuberculosis of the lungs, and with no favorable outlook of my case. I came under the care of Dr. Walters about the sixth of January, 1915."

This photo is twice as wide and twice as long as the bone.

This is a history of this patient as given in his own words, as I have just recited them.

About the early part of January, 1915, as stated by the patient, he came under my observation.

Age: 17 years.

Occupation: School boy.

Family history: Father, mother, one brother, living and well. No history of malignancy, nephritis, insanity, or tuberculosis.

Personal history: Had the usual diseases of childhood. Perfectly well up to the age of nine years, at which time he was supposed to have swallowed the soup bone, and from that time on up to the present time he was troubled with chronic cough, expectoration, muco-purulent in character, occasional hemorrhages, and sometimes blood-streaked sputum.

His physical development did not differ much from the ordinary boy of his age, except that his frame was somewhat smaller. He did well at school, and was able to do chores about the home besides his studies.

The temperature range during my observation was never above 99.4, most of the time normal.

Pulse ran between 74 and 84.

A physical examination of the chest revealed:

Some diminution—antero-posteriorly—diameter.

No retraction of the inner spaces.

Chest well developed.

Was unable to locate any impairment on percussion or any difference in the breath sounds.

The abdomen was negative.

The urine was negative.

* Paper presented to Tulare County Medical Society, July 3, 1917.

Blood tested practically normal, with a slight increase in leucocytes.

Sputum was negative for T. B. (I examined microscopically at least 15 times.

Bacteriological examination, made in San Francisco once, and three or four times in Fresno, showed there were staphylococci, streptococci and carcine, but at no examination ever made of the sputum, either by myself or the bacteriologist, were we able to discover tubercle bacilli.

The bacteriologist at the tubercular sanitarium also failed to find T. B.

X-rays taken showed some sclerotic changes, probably healed in gland, but no foreign body.

I hesitated before making a diagnosis at this time, until I had consulted one of my colleagues, a nose and throat specialist, in one of the nearby towns, and we decided that this boy was suffering from a **chronic catarrhal** naso pharyngitis and probably **bronchiectasis.** Working along these lines we made frequent local applications, besides blood tonics, milk and egg diet, and fresh air treatment, and autogenous vaccine. The patient held his own and probably gained a little during this time.

During my absence in San Francisco, in the early part of August, 1916, this patient was seized with a profuse hemorrhage. The parents told me later that there must have been at least a pint of blood coughed up. The parents became greatly alarmed, and consulted one of the local physicians, who immediately called in another physician from another town, and upon consultation they decided that the boy had better be sent immediately to a tubercular sanitarium in the mountains. (This sanitarium, I may say, is one of the best tubercular sanitariums in our state.) The boy remained at this tubercular sanitarium for five months, with his mother, during which time he gained twelve pounds, being under the regular T. B. treatment—fresh air, milk and eggs, and receiving autogenous vaccine. He was markedly improved in general health, but the cough did not improve very much. He thinks there was some improvement in the cough, but he still coughed and expectorated. During the time that this young man was confined at the tubercular hospital, I read an article in the California State Medical Journal, by Dr. H. B. Graham, of San Francisco, upon foreign bodies in the respiratory tract, Vol. 14, No. 9, September, 1916. Case No. 3 of Dr. Graham corresponded identically with this young man, which is found on page 356 of this journal, with the exception that Dr. Graham's patient was 46 years of age, whereas my patient was 19 years of age. After reading this article and seeing the strikingly similar conditions present in the patient mentioned by Dr. Graham, I immediately wrote to the medical director of the tubercular hospital, where my patient was confined, and requested that he look up this case in the journal, and suggested that we have stereoscopic X-ray plates made, with the idea of locating the bone which this boy said he had swallowed eleven years ago. These X-ray plates were made, at my suggestion, by one of the X-ray men near the sanitarium, with the result that a doubtful foreign body was located in the right lung, but the X-ray man said it was very doubtful if its removal could be accomplished by bronchoscopy, as it was located very far down in the bronchial tree, corresponding to the eighth rib. I requested, however, that the plates be forwarded to Dr. Chevalier Jackson, at Jefferson Medical College, Philadelphia, and requested Dr. Jackson to go over these plates and advise us what he thought of the suspected foreign body. Dr. Jackson wrote me, stating that there was no doubt in his mind as to the object's being a foreign body, but that he could not guarantee that it was a foreign body, nor would he guarantee that he could successfully remove it, but that if the patient were a member of his own family he certainly would have a bronchoscopy done. He said that the chances of success were about 98% for removal, with no mortality. Having personally seen Dr. Jackson's work and knowing his ability, I was very enthusiastic that my patient should be examined by Dr. Jackson. The parents of my patient and I talked this matter over, and we decided that we should have the patient go to Philadelphia and have Dr. Jackson do a bronchoscopy. The patient arrived in Philadelphia on the 2d day of April, 1917, and a bronchoscopy was performed that same day.

. The following is a report of the operation, from the records of the hospital:

Case: No. Fbdy 608. Bone in right bronchus 11 years.

Hospital: Jefferson.

Date: April 2, 1917.

Age: 20 years.

Name: H. E.; address, Dinuba, California.

Referred by: Dr. Paul Walters; address, Dinuba, California.

Anesthetic: Local.

Conditions found on first endoscopy: Firm fibrous stricture with bone immediately below it.

Difficulties and solution: Removal obstructed by proximal fibrous stricture. Copious discharge of blood-stained pus from abscess below foreign body.

Result: Bone removed.

Remarks: Lumen of stricture circular. Cross section of bone angular. Pus ejected around bone at spaces between angles. Surgeon, Chevalier Jackson.

The bone measured 7/8 of an inch long by 3/8 of an inch across. The cross section of the bone was angular.

The patient remained in Philadelphia four days after the bronchoscopy, then returned to his home in California, arriving here the 11th day of April, just nine days after the bone had been removed. The present condition is very good. There is still some cough, with some expectoration, which is due to a drainage from the abscess cavity. The cough is much decreased. An X-ray picture, taken twenty minutes after the bone was removed by Dr. Jackson, showed that the air had already begun to enter the abscess cavity.

I am presenting herewith one of the X-ray pictures taken and a photograph of the bone. The bone which was removed, Dr. Jackson retained for his personal collection, as is his custom in these cases.

This patient is very interesting, because of the failure to locate the bone by the many physicians who went over him. This was very likely due to the lack of interest that we usually take in our patients, in not paying enough attention to their own statements about their illness, as his boy told every physician that he consulted that he had swallowed a bone, and practically every one of us ignored this fact. It is very interesting, secondly, because the bone did not appear on the X-ray plates until they were examined stereoscopically. Of importance is the fact that it is necessary for us to read our medical journals, as I think the fact that I noticed this particular case recorded by Dr. Graham, together with the fact that I remembered the statement of my patient of having swallowed the bone, played a very important part in successfully diagnosing the condition in this boy. And lastly, the ability of Dr. Jackson, with his wonderful technic in getting the foreign body out by bronchoscopy.

SPINAL CORD CHANGES IN COMBINED SCLEROSIS.*

By WALTER F. SCHALLER, M. D., San Francisco.

It is the subacute form of spinal disease usually associated with anemia which I have selected for a study of cord changes and related clinical symptomatology. In our experience this affection is of comparatively frequent occurrence in California, much more often seen than disseminated sclerosis, although not nearly so often as tabes dorsalis. My records show an incidence about equal to that of brain tumor. It is of rare occurrence in France, more frequent in Germany, and in England the condition is, I should judge, as often met with as with us. Bramwell, in a recent article, makes the point that this disease occurs usually after the age of 35 years. In a review of my series of cases I find that in most instances the disease occurred beyond 40 years of age, although in a few cases it occurred in the twenties. In regard to sex I find a preponderance of males —in a total of 23 cases there were observed 16 males and 7 females. Bramwell states that in five cases of subacute combined degeneration seen by him all were in males. The recognition of this disease is accredited to Lichtheim in 1887, although Gowers (1886) in a clinical lecture on ataxic paraplegia evidently dealt with this disease. American authors—Putman (1891), Taylor (1895), Dana (1899), contributed to our knowledge of this affection. In 1900, an important article appeared in Brain by Russell, Batten and Collier. More recently, articles have appeared by Hennenberg in Lewandowsky system, Bramwell, and Cadwallader. This latter author, basing a clinical study on a communication of Dejerine—syndrome of the long radicular fibres of the posterior columns of the cord in subacute combined sclerosis—emphasized the importance in testing the deep sensibility, particularly the bone sensibility, which is so early affected in combined sclerosis, the superficial sensibility remaining intact, as a rule in the first stages.

Etiology: The cord degeneration is supposed to be due to some toxin which is also responsible for the blood picture. Whether this toxin is caused by some buccal or gastro-intestinal infection which Dr. William Hunter long ago suspected was the case in pernicious anemia, is at present undecided. I may state, however, that from the symptomatology, clinical signs and post mortem evidence, there is considerable reason to support this point of view.

Hennenberg and Bramwell hold that the degenerations in the cord are not true primary system degenerations, but are rather the coalescent degenerated areas causing a secondary pseudo system degeneration. These degenerations are, however, loosely systematized and furnish, at least at the beginning of the disease, an interpretation of the lesions by the symptomatology. Bramwell further believes that the underlying associated anemia is much more frequently the pernicious form than is commonly supposed. In support of this view he relates a case in which in the presence of cord symptoms, no marked anemia occurred for three years, the patient eventually succumbing, however, to pernicious anemia. In my series there were ten cases of pernicious anemia (severe anemia in which the blood index was 1. or over), four cases of secondary anemia, and six cases in which the blood picture was negative. In three cases, the blood examination was incomplete. In four autopsy cases I have made sections of the spinal cord at different levels.

The histological picture of the lesions is a primary degeneration of the nerve elements and replacement by neuroglia. When the degeneration is acute, vacuolization also occurs. The occurrence of amylaceous bodies is frequent. Scattered throughout the posterior and lateral columns is a diffuse cellular increase of indeterminate nature. Putman speaks of these cells as granule cells and their presence is apparently due to the rapid degeneration of myelin and impairment of circulation. They are not considered to indicate inflammation; in fact, there are no evidences of a general or local inflammatory process in either the cord tissue proper, blood vessels or meninges. Numerous observers have emphasized the fact that Lissauer's zone is spared in the degenerations. The process has been noted to be more frequent in the dorsal cord than in the lowest portions of the cord, and is quite often absent in the sacral region. Likewise the degenerations diminish in intensity rapidly above the cervical cord.

A brief account of my autopsy cases is as follows:

Case 1. J. R. M. Dispensary No. 927. This case corresponds to the classical type of Russell, Batten and Collier. Patient entered Clinic Feb. 28, 1912, age 47 years, complaining of inability to walk on account of weakness in legs and numbness, especially in the right leg.

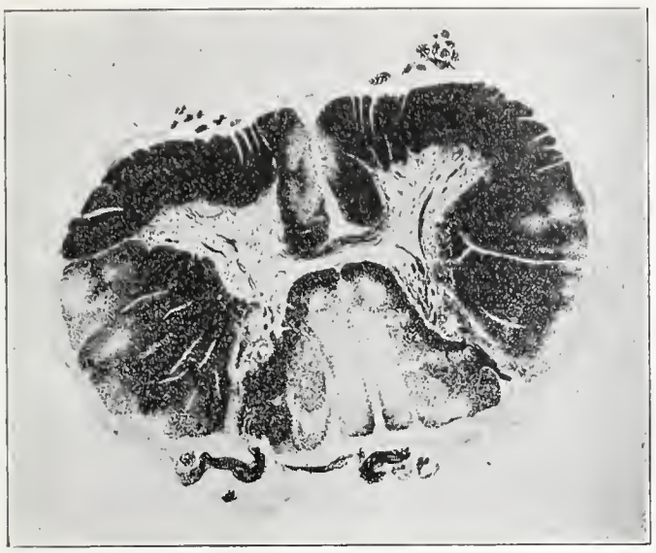
Onset of trouble said to have followed a fall in June, 1911, and began with numbness in legs, especially the right.

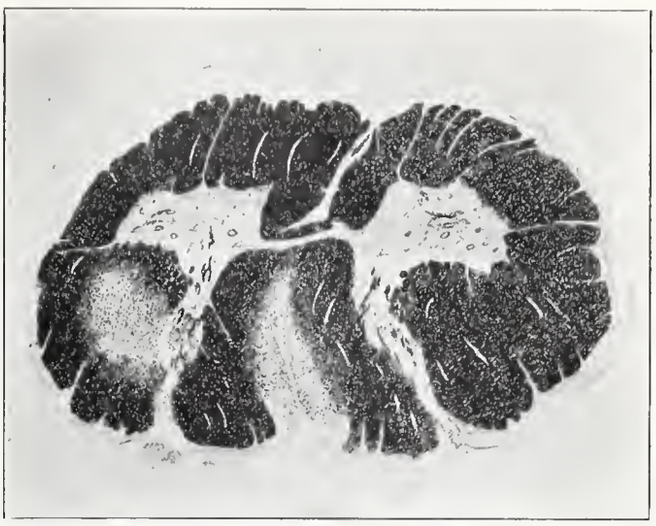
Physical Examination: When seen in hospital, patient was bedridden, suffering from a spastic paraplegia with ataxia. Teeth in poor condition; pain felt on deep palpation over gall-bladder and appendix; knee jerks and ankle jerks lively and hyper-tonus of leg muscles. Babinski and Oppenheim signs positive; pupils equal and react to light and accommodation. Sensibility: In the lower extremities, sensation for touch normal; pain sense somewhat impaired; heat and cold also confused, especially in the outer portion of both legs, but with no definite localization. In the right gluteal region, and the dorsum of the left foot, there are areas of hyper-algesia. Deep sensibility not impaired. (Note in history—no mention of separate tests.) Even at the beginning there appeared to be some impairment of the mentality shown by lack of attention and variation in the account of his illness. The value of the sensibility tests suffer perhaps on this account. As the disease progressed there was mental deterioration, the picture resembling the dementia in paresis and in addition patient was disoriented, suffering with delusions, and hallucinations of sight. Very restless, picked at imaginary objects, talked unintelligently. Loss of sphincter control; edema of legs and marked superficial sensory impairment in same, then loss of tendon reflexes and a picture of flaccid paralysis. Cerebro-spinal fluid for cells negative, globulin slightly increased; Was-

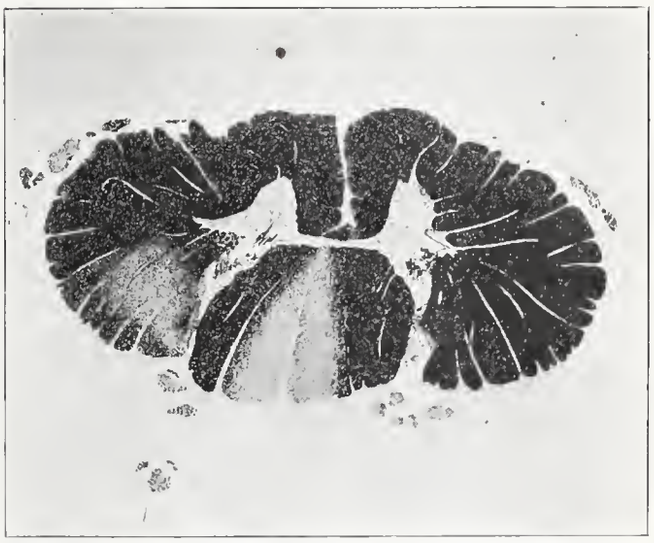
* Read before the forty-sixth annual meeting of the Medical Society of the State of California, Coronado, April, 1917.

* From the Neurological Clinic, Medical School, Leland Stanford Jr. University.

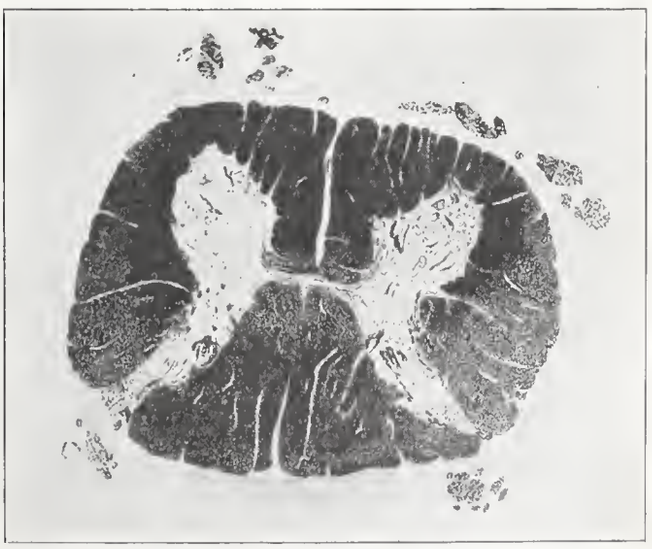
† The camera lucida drawings in this card series were made by my wife, Florence Crum Schaller, to whom I here wish to make acknowledgment.







Case No. 1.—J. R. M., Dispensary No. 927, Combined Sclerosis. Weigert Stain of C-vi, D-ii, L-iii Cord.



Case No. 2.—J. K., Dispensary No. 11465-12, Combined Sclerosis. Weigert Stain of C, D, L Cord.

sermann in blood and cerebro-spinal fluid negative. Urine negative. Blood examination:

Date, March 14, 1913; Red cells, 3,520,000; Haemoglobin, 68%; Index, 0.9; Remarks, Poikilocytes few.

Patient died, March 21, 1912, of weakness, respiratory and cardiac failure.

Anatomical Diagnosis: Pernicious anemia, combined sclerosis, cystitis, acute pyelonephritis.

Weigert sections of cord (C-vi D-ii D-xi L-iii no sacral specimen) show marked degeneration in median parts of posterior white columns, most marked in, but not limited to, the median column of Goll. Marked quite irregular degeneration in lateral white columns and marked degeneration on either side of anterior longitudinal fissure. The sparing of the Lissauer zone is a striking feature of the histologic picture and in correlation with the sensory tests is in favor of this tract conducting touch sensibility.

Case 2. J. K. Dispensary No. 11465—12. This case resembles the type described by Gowers in its chronic course. Patient entered Clinic Oct. 16, 1912, age 51 years, complaining of weakness, difficulty in walking and numbness all over the body.

History of chancre at 21 years of age; 13 years ago paraplegia from which he never wholly recovered, but could walk without aid or support. Second attack of paraplegia 3 years ago, third attack 2 years ago. History of alcoholism. Since first attack slight incontinence of anal and vesical sphincters.

Examination: Marked pyorrhea; pus in nasal pharynx and nose. Flaccid paralysis; marked asthenia, mental deterioration evidenced by forgetfulness and lack of attention and emotionalism. Pupils react to light and accommodation; marked horizontal nystagmus both eyes. Patellar and achilles reflexes absent. Babinski, Gordon, Mendel Bechterew, Rossilimo negative. Oppenheim positive on right side (?), Strumpell's sign positive both sides. Sensibility disturbed in the nature of hyper-algesia, thermo-hyperaesthesia over entire trunk and upper extremities. Hyper-acsthesia on posterior part of trunk and upper thigh, left side. Hypo-aesthesia in lower extremities, particularly on posterior aspect. Deep sensibility: Sense of position, location, articular and muscular sense, pressure sense impaired. Ataxia in finger to nose and heel to knee tests.

Laboratory Cerebro-spinal fluid, normal; Wassermann negative, blood and cerebro-spinal fluid. Urine negative.

BLOOD REPORT.

Date	Red Cells	Haemoglobin	Color Index	Remarks
Oct. 18, 1912	2,250,000	60% Sahli	1.1/3	Poikilocytes few
Oct. 23, 1912	2,447.000	58% Sahli 64% Haldain	1.1 Sahli 1.3 Haldain	Anisocytosis

Death—Oct. 31, 1912, from bulbar symptoms ?—respiratory paralysis ?

Anatomical diagnosis: Cirrhosis of liver, severe anemia, combined sclerosis, chronic interstitial nephritis ?, arterio-sclerotic scars in kidneys. Old scars at both apices, emphysema hypostatic pneumonia, general adiposity, marked fatty infiltration of right heart, cholelithiasis.

Weigert and Kultschitzky sections of lumbar, dorsal and cervical cord, medulla, pons and midbrain. The degenerations are comparatively slight as compared with the preceding case, not being traced upwards from the pyramidal decussation. Lissauer's zone is not involved. The principal changes are in Goll's column and a unilateral involvement of the lateral column adjacent to the posterior horn but not reaching the periphery of the cord.

Case 3 (erroneously diagnosed clinically and at autopsy as tabes). G. D. Dispensary No. 10536—12. Patient entered Clinic Sept. 7, 1910, age 48 years, complaining of numbness in both feet and weakness since four months. Patient later complained of nocturnal incontinence of urine and pain in legs, and also of attacks of abdominal pain and diarrhoea, which appeared to be typical gastric crises.

Examination on entrance: Marked tenderness in region of gall-bladder, especially upon the Murphy manoeuver, marked distention in region inferior to the umbilicus. Gait ataxic; positive Romberg, absent patellar and achilles reflexes. The superficial sensibility was not impaired and the stereognostic sense in the hands was normal. The pupils reacted to light. Repeated blood Wassermanns were negative and two analyses of the cerebro-spinal fluid showed no increase in cells or globulin. The second fluid, however, showed a faintly positive Wassermann reaction. Patient gave a history of a chancre several years previously.

The case was diagnosed as tabes and was given anti-syphilitic treatment, followed by temporary improvement. The patellar reflexes were possible to elicit at this period. The course of the disease, however, was progressive. This patient died a suicide from a gunshot wound during an attack of mental aberration in the course of a lobar pneumonia.

Autopsy: Dec. 23, 1912, by Dr. Wm. Ophuls.

Anatomical Diagnosis: Tabes dorsalis—lobar pneumonia and bullet wound in forehead.

Blood Examination: Date, Aug. 22, 1912. White blood cells, 10,200.

White blood cells:

Polymorphonuclear	.....66%	per c m m
Lymphocytes	.....26%	" "
Large mononuclears	.... 4%	" "
Eosinophiles	..... 2%	" "
Basophiles	.....	
Transitionals	..... 2%	" "

Date, Sept. 13, 1912. White blood cells, 8,200. (Blood examination incomplete.)

Histological examination of the cord: Weigert sections of sacral, lumbar, dorsal and cervical cord and at lower level of medulla showed symmetrical degenerations very slight in sacral region and limited to the lateral columns, and more intense in upper lumbar, dorsal and cervical regions. In the posterior columns the column of Goll and adjacent Burdach column are constantly affected. The Lissauer tract is slightly, if at all degenerated.

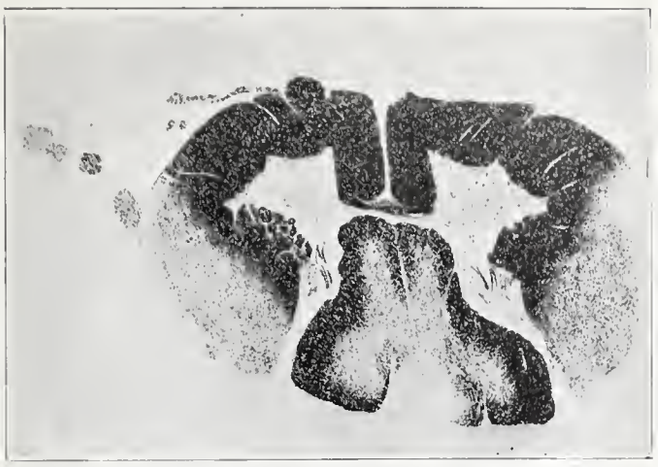
Case 4. M. S. Private records No. 236; age 49 years. Entered St. Luke's Hospital, San Francisco, Aug. 3, 1914. (History obtained from hospital records. Case not examined personally.) Duration of present illness 1½ years. Complaint: General weakness, periods of paresthesias, loss of appetite and drowsiness. Previous history of constipation and diarrhoea and an attack of jaundice; 16 years ago an attack of paraplegia lasting one day. Denies syphilis.

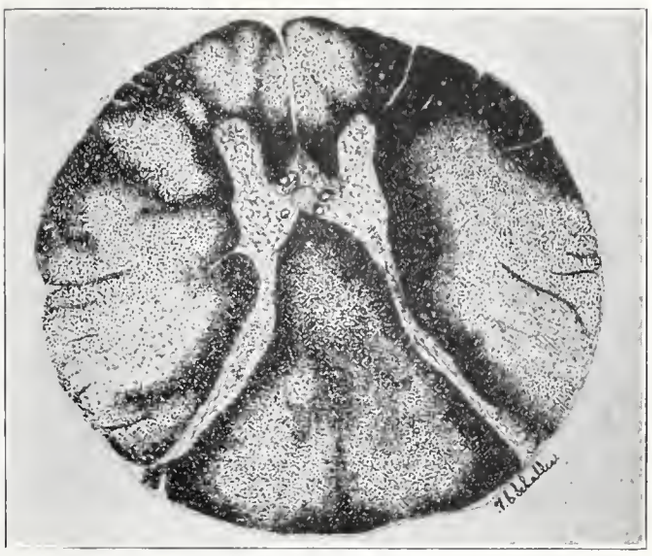
Physical examination: Anemic looking. Liver tender over gall-bladder. Lively tendon reflexes; ankle, patellar clonus, Babinski and Oppenheim present. Anesthesia below 10th, 11th dorsal. Mental state: Very complaining and irritable and lack of apprehension. X-ray findings denote probable malignancy of pyloric end of stomach.

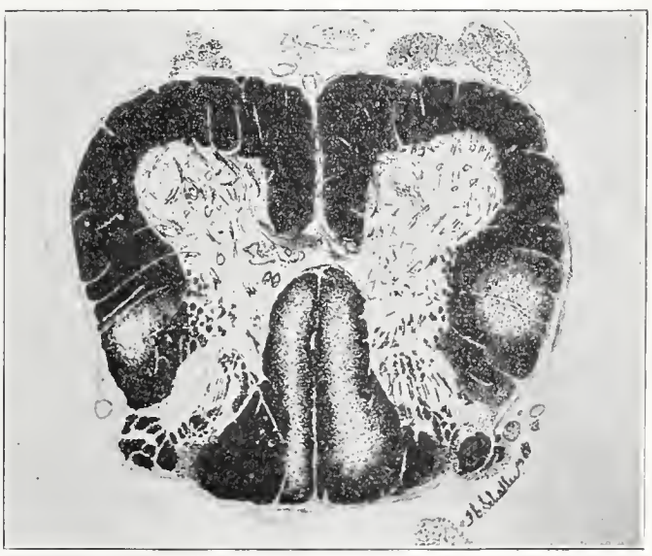
Probable diagnoses: Metastatic spinal tumor at about 9th, 10th, 11th dorsal. Transverse myelitis.

BLOOD REPORT.

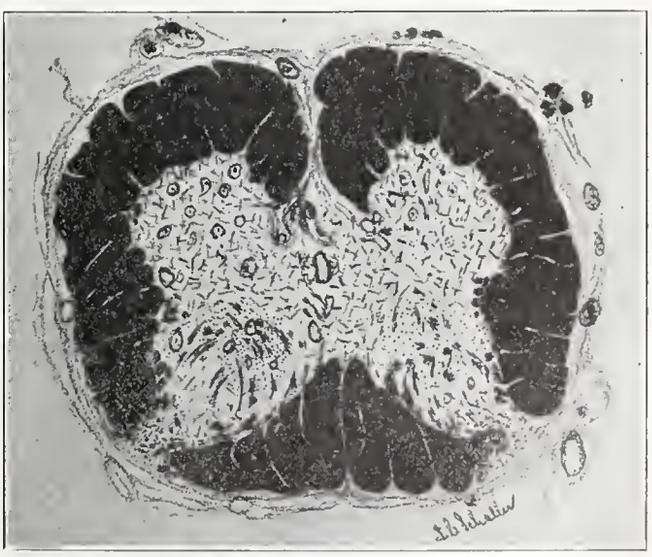
Date	Red Cells	Haemoglobin	Color Index	Remarks
Aug. 5, 1914.	1,500,000	35%	1.1	Anisocytosis—Poikilocytes
Aug. 13, 1914.	1,400,000	35%	1.2	
Aug. 15, 1914.	1,850,000	44%	1.2	Transfusion of blood, 16 min. duration
Aug. 16, 1914.	3,000,000	60%	1.0	
Aug. 17, 1914.	2,400,000	65%	1.3	
Aug. 21, 1914.	2,400,000	60%	1.2	
Aug. 28, 1914.	2,900,000	50%	1.3	







Case No. 3.—G. D., Dispensary No. 10536-12, Combined Sclerosis. Weigert Stain of C, D, L Cord.



Case No. 4.—M. S., Private Records No. 236, Combined Sclerosis. Weigert Stain of D-xii, L-iv, S-ii Cord.

Gait in Combined Sclerosis. Personal Case.

Patient died Sept. 3, 1914.

An incomplete autopsy was done, the lower portion of the cord only being removed.

Weigert stains from D-xii L-iv S-ii studied. The saeral sections show no degeneration. In the lumbar cord the principal degeneration is in Goll's column. The dorsal cord is greatly affected, the degenerations not being limited to any fiber system in the lateral and anterior white columns. The Lissauer zone in the lumbar region apparently shows a thinning of the fibers, but in other loealities seems unaffected. The great destruction in the dorsal region assumes the severity eomparable to a transverse myelitis.

The chief clinical features of subacute combined sclerosis will be seen to be a gradual increasing ataxic paraplegia, which later, however, may become flaccid, usually accompanied by paresthesias, but not pain. There is frequently at first, but not always an associated anemia which later often becomes pernicious in type. Mental symptoms characterized by progressive dementia, confusion, delusions and hallucinations, may develop as the disease progresses. The course of the disease varies greatly, running a protracted course with remissions as is exemplified in case No. 2, here reported; or running a rather rapid subacute course, as in case No. 1, in which the duration of the disease was nine months only. I have at present cases which appear to be arrested or improved. In general, however, I believe the prognosis to be grave.

Tibial Phenomenon of Strumpell.

The objective symptoms referable to the spinal cord are seen to be a combination of those arising from lesions of both the lateral or pyramidal tracts, and the posterior columns. In this latter involvement we have disturbances of the deep sensibility and probable consequent ataxia. The early involvement of the bone sensibility emphasized by Cadwallader has been mentioned. The superficial sensibility is slightly, if at all, affected until the terminal stages. Dejerine emphasizes this fact in calling attention to the relatively early involvement of tactile sensibility in tabes from which disease combined sclerosis must in certain cases be differentiated (combined tabes). The motor symptoms are evidenced by weakness, increased muscle tonus, lively tendon reflexes and pathologic skin reflexes amongst which the Babinski, Oppenheim and Gordon may be mentioned. An important reflex, the tibial phenomenon of Strumpell which may be of almost pathognomonic signification, was alone present in case No. 2. This reflex consists of an adduction and internal rotation of the foot, due to overaction of the tibialis anticus muscle when the lower extremity is raised against resistance applied to the thigh, the patient lying in the supine position (see photograph).

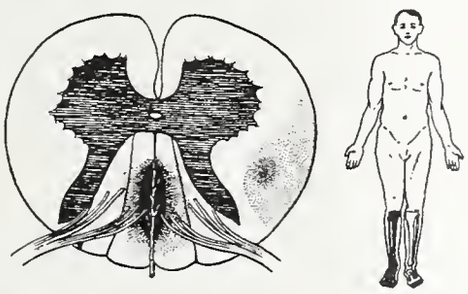
A peculiar gait has been described by Crouzon (Thesis of Paris), called by him "trainment des jambes." This is a dragging of the lower extremities, somewhat similar to the hysterical gait described by Todd. One clinical case presented this gait but it is not of frequent occurrence in my series.

From the differential diagnostic standpoint even in fairly well advanced cases tabes, cord tumor and transverse myelitis must be thought of, as illustrated in the foregoing case histories. The condition most frequently confused, however, with subacute combined sclerosis is disseminated scle-

Gait in Combined Sclerosis. (After Cruzon.)

rosis. Bramwell dwells particularly on the points of difference between these two diseases. The diagnosis of combined sclerosis is particularly difficult in the early cases not associated with anemia. Such cases may easily be confused with a neurasthenic state on account of the paresthesias, lively inferior tendon reflexes, weakness, and the frequent association of gastro-intestinal symptoms. The following is an illustrative case in which combined sclerosis is strongly suspected.

A. W. Male, age 55 years, with complaint of several years' duration of "stomach trouble" and "heartburn." More recently patient has complained of nervousness and has also noticed a weakness and unsteadiness on feet and a peculiar tingling in the feet, hands and over entire body. His former physician had noted an increase in activity of the lower tendon reflexes which previously had been of normal intensity. The neurological examination, which included a cerebro-spinal fluid analysis and Wassermann tests, proved negative, with the exception of exceedingly lively tendon reflexes and a possible diminution in the bone sensibility in the lower extremities. The blood examination showed no anemia.



In combined sclerosis of the spinal cord associated with pernicious anemia the degeneration of the posterior columns is peculiar in that it begins in the more medianly situated fibers, that is to say, in the long fibers of the posterior columns, or Goll's columns, and in the parts adjacent to Burdach's columns. Consequently, in the early stages, deep sensation alone is disturbed, more particularly bone sensation and the sense of muscular position.

Diagram showing degeneration of the long fibers of posterior columns and disturbance of bone sensation. (After Cadwallader.)

CONCLUSIONS.

From the foregoing spinal cord examinations and from case records, the following points seem worthy of especial mention:

1. The cord changes in combined sclerosis are pseudo-system degenerations of toxic type. These degenerations in the posterior columns of the cord affect more particularly Goll's column and the adjacent portion of Burdach's, column sparing Lissauer's zone and the root entry zone. This localization explains the early involvement of the deep sensibility and conservation of the superficial sensibility.

2. With characteristic cord symptoms a pronounced anemia may not be present. In the absence of a low red blood count and low haemoglobin—an index above 1. is suggestive of a beginning pernicious anemia.

3. A focal infection is frequently found either in the buccal cavity or the gastro-intestinal tract.

Book Reviews

The Surgical Clinics of Chicago, Volume I Number V (October, 1917). Octavo of 214 pages 84 illustrations, Philadelphia and London: W. B. Saunders Company. 1917. Published bimonthly: Price per year, paper, $10; cloth, $14. Contents:

Dr. A. D. Bevan: Benign tumors of breast. Carcinoma of breast. Dr. A. J. Ochsner: Talipes equinovarus following acute anterior poliomyelitis. Varicose veins of leg. Postoperative tetany of sternocleidomastoid muscle. Dr. J. Ridlon: Hip disease. Dr. A. E. Halstead: Hereditary deformans chondral dysplasia. Dr. M. L. Harris: Hernia of breast. Dr. E. W. Andrews: Hemangioma of brain inoperable by ordinary methods. Dr. D. B. Phemister. Brain cyst following skull fracture. Dr. N. M. Percy: Partial evisceration through vagina during attempted abortion. Dr. C. Beck: Tendo- and neuroplasty. Elephantiasis and its treatment by Handley operation. Dr. H. L. Kretschmer: Hydronephrosis due to kidney stone. Ureteral calculus. Dr. T. J. Watkins: Cystocele, uterine prolapse, etc. Radium in hemorrhage at the menopause. Dr. D. N. Eisendrath: Complications of appendicitis. Clinical importance of congenital anomalies of kidney. Dr. H. McKenna: Perforated duodenal ulcer. Early recognition and treatment acute appendicitis. Dr. H. E. Mock: Case of bichlorid poisoning diagnosed and operated on as perforated gastric ulcer. Dr. D. C. Straus: Hammer toe. Dr. Kellogg Speed: Haematuria in appendicitis.

Radium Therapy in Cancer, at the Memorial Hospital, N. Y. (First Report, 1915-6). By Henry H. Janeway, with discussion of Treatment of Cancer of the Bladder and Prostate by B. S. Barringer, and an introduction upon the Physics of Radium by Gioacchino Failla. New York: Hoeber. 1917.

A résumé of the results of radium therapy during two years, in 424 cases of malignant tumors. Of these, 120 showed clinically complete retrogression, 134 were improved, 162 unimproved and fifty-nine were still under treatment. As a majority of the cases were classed as surgical derelicts and discards, the results may be considered as remarkable, and the author deplores the fact that more early cases do not receive the benefits of radium. The Memorial Hospital is fortunate in having about 2.8 gms. of radium, and the emanation is used in preference to the element. The technic of application and exposure time in each individual lesion is carefully given and particular emphasis is laid on the necessity of carefully screening for all except the most superficial lesions. In addition to the differential action of tumor cells whose susceptibility to radium are from two to seven times greater than that of normal tissue—the author believes that there may also be a stimulation of anti-cancerous activity of neighboring normal cells. Skin lesions, tumors of the parotid and the lymphosarcomas show the highest percentages of retrogression, while the carcinoma of the esophagus were the least encouraging. The difficulties in the treatment of the latter condition are fully described. Case history reports occupy a large part of the volume and it is regretted that more careful microscopical examinations could not be obtained in many of the cases, particularly those of the bladder and prostate. In these latter conditions radium probably offers the best therapeutic results. The introduction on the physics of radium and their close relation of the radiations to the Roentgen rays is carefully written and forms a valuable part of the book. This little volume should be of value to all interested in the treatment of malignant tumors, and particularly those attempting the use of radium. L. B.

Eye, Ear, Nose and Throat. A Manual for Students and Practitioners. By Howard C. Ballenger and A. G. Wippern. New second edition. Philadelphia and New York: Lea & Febiger. 1917. Price, $3.50.

This well-known manual, now in its second edition, gives in a highly condensed form much valuable information. It would be an invaluable book for students preparing for examination or for general practitioners who might need a book for quick reference on eye, ear, nose and throat work. H. H.

New System of Gynecology. Ed. by Thos. W. Eden and Cuthbert Lockyer. 3 vols. London: Macmillan. 1917.

This is undoubtedly the best and most comprehensive gynecology that has appeared in any language. The contributing authors include sixty of the best known British and two American gynecologists. Each man was evidently chosen because of his ability to handle his particular subject and the result is a system of gynecology which is second to none. A modern gynecology necessarily includes the surgery of the female urinary organs and abdomen, and the authors have left nothing to be desired in this respect. There are chapters which deal fully with the special methods of investigation of diseases of the kidney, bladder and rectum. Volume I treats with the anatomy and physiology of the female reproductive organs and their malformations, also the various methods of examination, infections, and a splendid chapter on disorders of function by W. Blair Bell.

Volume II deals with the diseases of the vagina, displacements and tumors of the uterus and diseases of the adnexa. The mechanics of retro-displacement and prolapse of the uterus are exhaustively discussed. We cannot agree, however, with Fothergill that the interposition (Watkins-Wertheim) operation for uterine prolapse is an entirely unsurgical and unnecessary procedure. Fothergill quotes figures showing five deaths and thirteen recurrences out of eighty-nine operations. This mortality for a condition which of itself offers no risk to life is appalling, to say nothing of the thirteen failures. The experience of the gynecological staff of the Lane and San Francisco Hospitals with the interposition operation has been quite the opposite. From 200 to 225 operations for cystocele and prolapse of the uterus by this method have been without a single death and the failures or partial failures have been so few as to be almost negligible. Many of the foremost gynecologists in the East are doing, and have been doing this operation for years with entirely satisfactory results.

Volume III considers diseases of the appendix, methods of examination of the urinary tract and the rectum, and diseases of the breast. A large part of this volume is given over to the technique of gynecological operations both major and minor. The volume is concluded by two chapters on Roentgen rays and radium in gynceological practice.

This new work should be in the library of every teaching institution and every surgeon doing gynecology. The broad scope of the work emphasizes again the fact that the modern gynecologist is no longer interested solely in plastic operations of the pelvic floor and with operations on the uterus and adnexa, but that he must be an abdominal surgeon as well. The book is profusely illustrated in black and white and in colors and the illustrations are particularly good. It makes excellent reading both for the student and the specialist and, although the three volumes seem rather expensive at first, they are well worth the price asked.

F. R. G.

Diseases of the Skin. By Richard L. Sutton. Second edition. St. Louis: C. V. Mosby Company. 1917.

That Dr. Sutton's admirable book should so quickly require a second edition shows the hearty welcome it has received from the medical public.

One of the excellencies of the book is that short, concise descriptions are given of rare affections frequently not mentioned by other authors, such as gangrenous balanitis, atrophy of the mucous membranes of the mouth, and atrophy of the fatty layer of the skin. Another admirable feature of the work is the full information it contains regarding affections of the mouth, tongue and lips. This is especially appropriate at a time when so much interest is evinced, both by the laity and by physicians, in abnormalities in these situations, because of the danger of mistaking them for manifestations of either cancer or syphilis. D. W. M.

The Roentgen Diagnosis of Diseases of the Alimentary Canal. By Russel D. Carman and Albert Miller. 504 original illustrations. 558 pp. Philadelphia: W. B. Saunders Co. 1917.

We have here a remarkable book written by two men of recognized ability, good judgment and enormous experience. They have made good use of their opportunities in checking their diagnoses at the operating table, and many case records are discussed at the close of each chapter. Although full references are given to the literature. the best thing about the book is that it everywhere represents the personal experience and opinions of the writers. This makes it interesting reading, not only for the novice, but for the experienced specialist. There has been great need for such a work, owing to the mushroom growth of the subject. Only five years ago the reviewer had to get his first radioscope from Germany because the only one then on the American market was a clumsy affair that had to be made to order. During the next two years a number of firms in the United States began to make such instruments; every hospital of any size fitted up an X-ray laboratory; and many physicians put such apparatus into their own offices. For a while there were more machines than experts to handle them and to interpret the findings. Although an enormous advance in diagnosis had been made in this way, as Coffey says, "Roentgen observation . . . is the most dangerous agent yet placed at the disposal of the unscrupulous (or he might have added, the honest, well-intentioned but poorly informed) surgeon, because it is so convincing to the laity." A meaningless kink or a normal variation of the colon will decide in favor of a needless operation.

Many of the chapters in Carman & Miller's book should be read and re-read by the young radiologist and gastroenterologist. The photographs on pages 84 and 85 should be framed and on the wall of every X-ray laboratory to remind the workers that "the stomach normally corresponds to the type of body, just as facial characteristics distinguish races." "Stomachs which are markedly dissimilar in their roentgenologic characteristics may each be appropriate for its possessor and functionate in a normal manner." Most novices with the X-ray are looking for the stomach of Gray's anatomy. As Carman & Miller say, "Certainly the steer-horn form of stomach is so rare that if this be the only normal stomach, then more than 90 per cent. of all stomachs must be abnormal" (p. 91). "Zealous use of the roentgen-ray in the search for abnormalities of the stomach is seldom unrewarded, and some degree of 'gastroptosis' is the rule rather than the exception" (p. 310). Their inclusion of the word "gastroptosis" in quotation marks is, we believe, justified because, as Béclére & Meriel have pointed out, there is no such thing as a **dropped** stomach; it never leaves its upper attachment to the diaphragm, so we should speak only of "lengthened"

stomachs. The authors agree that "from a roentgenologic standpoint, the position which the stomach occupies in the abdominal cavity is its least important characteristic" (p. 309). They agree with Cannon that "drainage" is a term that can hardly be used when dealing with muscular organs floating all together in the abdomen (p. 91).

The colon also has many normal variations, and we recommend Figures 404-407 as objects of careful and thoughtful study for the scores of well-intentioned doctors who have made hopeless hypochondriacs out of slightly constipated people by pointing out as toxin-producing abnormalities harmless folds in their colon pictures.

In four years' study of constipated colons, Carman and Miller and the surgeons have failed to find any obstructive kinks. Angulations were often observed, but these produced no stenosis or back-pressure (p. 501). Their discussion of "intestinal stasis" has, perforce, been derived mainly from the literature. Insufficiency of the ileocolic valve, as demonstrated by the enema, has been meaningless in their experience.

"In regard to adhesions generally—and this applies not only to the colon but to the entire gastro-intestinal tract—it may be said that one of the hardest lessons the roentgenologist has to learn is that juxtaposition of the viscera does not necessarily mean that they are adherent to each other, but, on the contrary, are rarely so" (p. 447). When they have diagnosed adhesions, the surgeon has rarely borne them out.

The book is indispensable to every worker in this field, and should have a great sale. It is a pleasure to recommend it to the physicians of California.

W. C. A.

PRAYER OF MAIMONIDES.

[Daily prayer of a physician before visiting his patients, translated from a Hebrew manuscript of a celebrated Hebrew physician of the 12th century. Translation reprinted from Dr. Harry Friedenwald, Johns Hopkins Hospital Bulletin, August, 1917.]

Almighty God, Thou has created the human body with infinite wisdom. Ten thousand times ten thousand organs has Thou combined in it that act unceasingly and harmoniously to preserve the whole in all its beauty—the body which is the envelope of the immortal soul. They are ever acting in perfect order, agreement and accord. Yet, when the frailty of matter or the unbridling of passion deranges this order or interrupts this accord, then the forces clash and the body crumbles into the primal dust from which it came. Thou sendest to man diseases as beneficent messengers to foretell approaching danger and to urge him to avert it.

Thou has blest Thine earth, Thy rivers and Thy mountains with healing substances; they enable Thy creatures to alleviate their sufferings and heal their illnesses. Thou hast endowed man with the wisdom to relieve the suffering of his brother, to recognize his disorders, to extract the healing substances, to discover their powers and to prepare and to apply them to suit every ill. In Thy Eternal Providence Thou has chosen me to watch over the health and the life of Thy creatures. I am now about to apply myself to the duties of my profession. Support me, Almighty God, in these great labors that they may benefit mankind, for without Thy help not even the least thing will succeed.

Inspire me with love for my art and for Thy creatures. Do not allow thirst for profit, ambition for renown and admiration, to interfere with my profession, for these are the enemies of truth and of love for mankind and they can lead astray in the great task of attending to the welfare of Thy creatures. Preserve the strength of my body and of my soul that they ever be ready to cheerfully help and support rich and poor, good and bad, enemy as well as friend. In the sufferer let me see only the human being. Illumine my mind that it recognize what presents itself and that it may comprehend what is absent or hidden. Let it not fail to see what is visible, but do not permit it to arrogate to itself the power to see what can not be seen, for delicate and indefinite are the bounds of the great art of caring for the lives and health of Thy creatures. Let me never be absent-minded. May no strange thoughts divert my attention at the bedside of the sick, or disturb my mind in its silent labors, for great and sacred are the thoughtful deliverations required to preserve the lives and health of Thy creatures.

Grant that my patients have confidence in me and my art and follow my direction and my counsel. Remove from their midst all charlatans and the whole host of officious relatives and know-all nurses, cruel people who arrogantly frustrate the wisest purposes of our art and often lead Thy creatures to their death.

Should those who are wiser than I wish to improve and instruct me, let my soul gratefuly follow their guidance; for vast is the extent of our art. Should conceited fools, however, censure me, then let love for my profession steel me against them, so that I remain steadfast without regard for age, for reputation, or for honor, because surrender would bring to Thy creatures sickness and death.

Imbue my soul with gentleness and calmness when older colleagues, proud of their age, wish to displace me or to scorn me or disdainfully to teach me. May even this be of advantage to me, for they know many things of which I am ignorant, but let not their arrogance give me pain. For they are old, and old age is not master of the passions. I also hope to attain old age upon this earth, before Thee, Almighty God!

Let me be contented in everything except in the great science of my profession. Never allow the thought to arise in me that I have attained to sufficient knowledge, but vouchsafe to me the strength, the leisure and the ambition ever to extend my knowledge. For art is great, but the mind of man is ever expanding.

Almighty God! Thou has chosen me in Thy mercy to watch over the life and death of Thy creatures. I now apply myself to my profession. Support me in this great task so that it may benefit mankind, for without Thy help not even the least thing will succeed.

Correspondence

MEDICAL MILITARY EXPERIENCES.

To the Editor: Since leaving San Francisco the last of May I have had quite an experience, which may be of some interest to the members of the Society. June, July and August we spent at the Medical Officers' Training Camp at Fort Riley, Kansas, during which time we were put through a strenuous course of military training. These three months were the hottest I have ever experienced, and believe me I never want to spend the same amount of time in the summer of this state again. Californians don't realize the glorious climate they have until they get away from it.

After leaving the training camp I was sent to Camp Funston, and at present am in command of the 314th Sanitary Train, which consists of four field hospitals, four ambulance companies and four camp infirmaries, 900 men in all and 49 officers. We are getting into shape rapidly, and expect by spring to be on the other side. I might here state as regards the medical officers in the service: what

we need is young men, not middle aged or old men, as in field service it is absolutely impossible for the older men to stand the gaff. Field hospital and ambulance service is the hardest physically and the men must be absolutely fit to stand up under what is expeeted of them. The young doctors who stay at home do not realize the seriousness of what our country has to contend with or I am sure more of them would volunteer. In my command I have about 50 per cent. of men who are over middle age, and such men as these have volunteered their service in a greater proportion to the younger men.

Our division, the 89th, is commanded by General Wood, one of the finest offieers the United States has today, and I am sure when it gets into active service it will be heard from to its eredit.

Very respectfully,

(Signed) BRUCE FFOULKES,
Major M. R. C., U. S. A.

Headquarters 314th Sanitary Train, 89th Division U. S. Army, Camp Funston, Kans.
November 21, 1917.

FROM ALLENTOWN.

To the Members of the Mendocino County Medical Society:

At Dr. Beckman's suggestion I will write something concerning the conditions here, and the work done sinee being called to aetive duty.

When we left Berkeley, our eompany consisted of 119 men with Captain Powell in command and Lieutenants Meads, Martin, McCullough and myself. Captain Powell did not come with us but arrived about one month later.

Our company was organized on the old plan but after our arrival was divided into sections of forty-five men each, in command of a lieutenant. The California sections were recruited to their full strength from men here. There were 116 sections in camp at the time we arrived.

This camp is run as a unit in many respects, regardless of the number of men here. For instance, the mess is general, and they were feeding at one time approximately 5000 men. I understand that this is the largest number of men fed by one mess organization in this country. As a rule, each company or battalion has its own individual mess. The Camp Infirmary is now in charge of a Philadelphia doctor and for patients who cannot be cared for at the camp, arrangements have been made at the Allentown Hospital, just across the street from the camp. Major Lockwood is the operating surgeon for the camp.

The camp is located at the Allentown Fair Grounds. These grounds include a racetrack, large grandstand built to hold 10,000 people, and buildings for exhibiting cattle, horses, and poultry. These buildings are all used to house men and during the summer wooden shacks with canvas roofs were built. During the last two months three large wooden barracks have been built and three more are now building. A heating plant is also under construction.

Our work has been entirely that of reorganizing the companies along the new lines and equipping the men.

One contingent left for France the early part of August but none since, and it is likely that most if not all those now here will remain here all winter.

The camp is well provided with ambulances, litters and trucks which are used for instruction purposes. At intervals we are sent out on praetice marches or hikes with detachments of men varying from 150 to 1500. During these hikes each command is organized as it would be in the field, thus giving valuable experience in camp sanitation, marching, feeding and caring for the men. I have been out on four hikes,. the longest one for nine days. The last one was for only four days and then we camped at an armory in Philadelphia. Reading (Pa.) was visited on a previous hike.

Ambulance is largely one of transportation and it was soon found that medical men could be mostly dispensed with. So early in September, non-medical men with executive and administrative ability were commissioned from the sections and a new service was organized. These men are now in what is known as the Army Ambulance Serviee. Since that time a number of medical men have been transferred to other places, such as Fort Benjamin Harrison, Fort Oglethorpe, transports or other places for instruction on active duty. I expect a transfer before long but a certain number of medical men will probably be kept here until the newly commissioned men get their bearings in their new places. Our work up to the present has been practically that of a line officer, but it is all valuable experience and will be helpful later on. We are sure to connect with medical work when the need comes.

On the last three hikes I was put in charge of the mess and on our last trip we had 450 men to feed and draw supplies for. We use kitchens built on wheels and are pulled by Packard trueks. These are built so that meals can be prepared and eooked on the road. Field ranges are also used when the camp is stationary. During an eight-day hike we moved camp every day and had the meals out on time. In Philadelphia we cooked a meal and then paraded to a large street in the center of the eity and served it. The food was served and the men marched away inside of an hour.

Our men are well equipped for clothing for a climate as cold as this and that is saying a good deal. Army food supplies are generous and of good quality, although not a great variety is available.

The health of this eamp can be considered remarkable. There has been only one death in five months and that from appendicitis. No typhoid nor contagious disease has yet appeared. The men have as a rule gained in weight and are quite satisfied. The doctors who came here with large abdomens have reduced their waist lines without losing in weight.

The people of this vicinity are of a Pennsylvania Dutch type and some can hardly speak English although they were born here and many have ancestors who fought in the Revolutionary war. On the whole they are very hospitable and the way they entertain the soldiers is remarkable. Occasionally one finds a friend of the Kaiser who will have nothing to do with us.

The bulletin sent by Dr. Beckman was very interesting and it is gratifying to note the number of the men from the Society who have entered the service.

(Signed) H. H. WOLFE.

Allentown, Pa.
Nov. 13, 1917.

Since the priee of milk went up to 14 cents a quart, tea and coffee have been substituted for milk by more than half of the 2200 families—all with children under six—included in the study of the effect of the increased price of milk just made in New York by the Mayor's Committee on Milk, the City Department of Health and the Association for Improving the Condition of the Poor. One hundred and twenty families have stopped taking milk entirely, in 25 of these there are babies under one year old. All the 2200 families have young children, but nearly half are taking from one-fourth to one-half less milk than before the price went up. Yet even before the larger price deereased the amount of milk they bought, these families were getting but little more than half the amount of milk which experts on children's diets say they need.

State Society

IMPORTANT NOTICE—INDEMNITY DEFENSE FUND.

Notes are now becoming due.

Do not let your membership lapse.

Each member will be informed ten days in advance of the due date of his note.

Medical Defense Rules, Section 3: "Dues must be paid to the Secretary of the County Medical Society to which each member belongs prior to the end of February of each year. Any member whose dues are not paid prior to March 1st and whose name is not reported as having paid his dues by the Secretary of his County Medical Society is dropped from the list of members in good standing as of January 1st of such year, and such member is deprived of Medical Defense afforded by the State Society for the period from January 1st of such year to the date when his assessment is received by the State Society. Members whose assessments are not received on or before February 15th of each year will be notified by letter from the Secretary of the State Society of such fact."

STATE DUES FOR 1918.

In order to defray the increased expenses of the Society due to its wider activities, and in response to the recommendations of the Council, the House of Delegates fixed the assessment for 1918 at $7.00, being an increase of $1.00 over the dues of last year.

COUNTY SECRETARIES TAKE NOTICE!

Kindly check the name of your President and Secretary appearing in the list of Presidents and Secretaries of the County Medical Societies on page xlviii of this issue. Any corrections should be received by this office not later than the 10th of January to appear in the February number.

The initial assessment for the organization of the Indemnity Defense Fund was fixed at $30.00, one-half to be paid in cash upon subscription, and the balance by note due one year thereafter.

In fairness to those who joined the Fund promptly, it was necessary to fix a limit upon this method of payment, and therefore DECEMBER 31st, 1917, was settled upon as the LAST MATURITY DATE FOR NOTES.

Commencing January 1st, 1918, a member joining the Indemnity Defense Fund will pay the full initial assessment of $30.00.

THE FOLLOWING RESOLUTIONS WERE ADOPTED BY THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA AT ITS MEETING HELD NOVEMBER 24, 1917, IN LOS ANGELES:

RESOLUTION I.

Remission of dues of members while in the federal service during the war.

RESOLVED: That the Council of the Medical Society of the State of California recommends to each component County Society that the constitution and by-laws of each component County Society be amended forthwith to provide that any member thereof now in the service of the United States by reason of the war with Germany and Austria, or who shall hereafter join such service, and who is thereby absent from his practice in his own community shall be exempted from all dues of his component county society during the period of such service;

Be it further resolved, that each member thus exempted shall not be exempted from the payment of his dues to the State Society, but shall transmit such dues through his County Secretary, payable to the Secretary of the State Society.

RESOLUTION II.

Discipline of members for unethical conduct.

WHEREAS, the component County Societies have from time to time applied to the Council for advice and instructions in the matter of discipline of members;

AND WHEREAS, the Constitution and By-Laws of the Society upon the subject are as follows:

Constitution, Article III.

Section 1. This Society shall consist of Members, Delegates and Guests.

Section 2. Members—The Members of the Society shall be the members of the component county medical societies.

By-Laws, Article I. Membership.

Section 1. All members of affiliated County Medical Societies shall, by virtue of such membership, be members of this Society, when duly reported by the President and Secretary of the County Medical Society. The name of the physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be prima facie evidence of membership in this Society.

Section 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of its proceedings, nor receive its publications, until he has been relieved of such disability. Any person who may be suspended for non-payment of dues is to be construed as coming within the provisions of this section.

Section 3. It shall be the duty of the Secretary of each component society to furnish the Secretary of this Society, before the first day of February of each year, a list of all members in good standing (with addresses) on the first day of January of each year.

By-Laws, Article VIII. County Societies.

Section 5. Each County Society shall judge of the qualifications of its own members, but, as such societies are the only portals of this Society and to the American Medical Association, every reputable and legally registered physician who does not practice or claim to practice, nor lend his support to, any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any County Society, full and ample notice and opportunity shall be given to every physician in the county to become a member.

Section 6. Any physician who may feel aggrieved by the action of the society of this county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, and if the decision of the Council be questioned, an appeal shall be taken to the House of Delegates, whose decision in any case shall be final.

Section 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts; but in case of every appeal, both as a Board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

NOW, THEREFORE, BE IT RESOLVED: That the Council recommends to the component County Societies the following procedure for discipline of members in such cases of unethical conduct or

practice as the respective County Societies may deem proper and suitable:

1. Private warning by the officers of the component County Society.
2. Reprimand by the President of a component County Society during open session or meeting.
3. Suspension for varying period, the duration of which to be determined by the component County Society or its constituted authorities.
4. Expulsion.

In cases 2, 3 and 4, due notice must be given to the member in question with full opportunity for him to be heard thereon.

Any of the foregoing disciplinary measures may be printed in the official publications of either the component County Societies or the State units.

County Societies

ALAMEDA COUNTY.

Urging that Alameda County take steps to protect itself from the swarm of tuberculous patients that probably will enter the county to secure admission to the new tuberculosis hospital at Livermore, Mrs. E. L. M. Tate-Thompson, director of the Bureau of Tuberculosis in the State Board of Health, has written to the Board of Supervisors, making suggestions as to the method of handling the matter and offering to assist the authorities. Mrs. Thompson says the new institution is the finest west of Chicago and pays tribute to Dr. R. J. Cary, its superintendent, as a scientific expert on the disease in question.

The Anti-Tuberculosis Society have received word of about 300 cases of tuberculosis in Alameda County, but a survey of the county is to be undertaken, which, it is expected, will bring to light fully half as many more.

The regular monthly meeting of the Alameda County Medical Association was held at the Hotel Oakland, Monday evening, November 19, 1917, at which the following program was presented:

1. Prophylaxis as applied to Normal Labor. Illustrated by lantern slides.
   Dr. Alfred B. Spalding of San Francisco.
2. The Ductless Glands in Obstetrics. Illustrated by lantern slides.
   Dr. Fredcrick M. Loomis.
3. Menstrual Disturbances in Girls of High School Age.
   Dr. Florence M. Sylvester.

These papers were all very interesting and called forth considerable discussion from Drs. Ewer, Hadden, Loomis, Spalding, and others.

The meeting was one of the best attended of the year, there being about sixty-five members present.

A meeting of the Association was held at the usual place on the evening of December 3, during which the following program was given:

1. Observations in General Surgery at the Clinical Congress of Surgeons.
   Dr. L. P. Adams.
2. Observations in Gynecology at the Clinical Congress of Surgeons.
   Dr. E. N. Ewer.
3. Prevention of Abdominal Ptoses.
   Dr. Kate Van Orden.

The discussion was entered into by Drs. Richards, Strietmann, and others.

Dr. Hamlin was to have presented a paper, but was unable to be present.

Drs. Piercy and Van Orden reported interesting clinical cases.

Dr. K. B. Smith, health officer for the city of Oakland, states that a comparison made between the birth records kept by the Catholic churches of this city and the records of the Health Office covering a period of 12 months, shows one thousand births that had not been recorded at the Health Office, as required by the birth registration laws.

Miss Martenyou has been appointed superintendent of the operating room at Fabiola Hospital, Miss S. Luhiman having resigned.

The city of Alameda claims the honor of being the first city in the State to enforce the new State law regulating the sterilization of drinking glasses.

Dr. K. M. Grant has recently located at Berkeley and is doing voluntary assistant work in the Department of Pathology at the University of California.

Dr. O. E. Kuhn has opened an office at 1033 Shattuck avenue, Berkeley, California.

Dr. Alvin Powell of Berkeley, who holds the rank of Captain, has charge of the University of California Ambulance Company at Allentown, Pa.

Dr. Henry Whisman, a graduate of Johns Hopkins Medical School and who spent two years' interneship at the Roosevelt Hospital, N. Y., has been appointed as resident physician on the Infirmary Staff at the University of California, Berkeley, California.

Dr. Albert Meads, First Lieutenant, Medical Reserve Corps, U. S. A., has been granted a leave of absence as Associate University Physician at the University of California, and is now at the Ambulance concentration camp, Allentown, Pa.

Dr. Bruno S. Landow of Oakland, California, is first surgeon for the ground school of aeronautics at the University of California, Berkeley, California.

A weekly obstetrical clinic has been established at the Oakland College of Medicine. Dr. Dudley Smith, assisted by Dr. O. E. Kuhn, will be in charge.

CONTRA COSTA COUNTY.

The Contra Costa County Medical Society met for its annual banquet and election of officers at the Hotel Oakland, November 17. The following officers were elected for the year 1918:

Dr. W. E. Cunningham, of Richmond, President; Dr. G. M. O'Malley, of Crockett, Vice-President; Dr. U. S. Abbott, of Richmond, Secretary-Treasurer.

Dr. Thos. W. Huntington, of San Francisco, was the honored guest of the evening. Dr. Huntington, in his graceful and eloquent style, told us of his recent travels in Europe. He held the guests around the banquet board spellbound for over an hour, describing his thrilling experiences, making all the doctors present feel that they had not yet even started to do their bit. At the conclusion of the meeting a motion was made by Dr. W. W. Fraser, and seconded by Dr. Leech of Walnut Creek, that a vote of thanks be extended Dr. Huntington for his kindness in being present at this meeting. The motion carried unanimously.

Captain C. L. Abbott had just returned from attending the meeting of the Clinical Congress of Surgeons of America, at Chicago, and a report of his observations there was well received. His reports of the methods of the treatment of wounds in Europe and their results were marvelous.

Those present at this meeting were: Dr. Thos. W. Huntington, of San Francisco; Dr. and Mrs. C. R. Leech, of Walnut Creek; Dr. E. E. Johnson, of Concord; Dr. and Mrs. G. M. O'Malley, of Crockett; Dr. A. L. Morrill, of Antioch. From Richmond: Dr. H. N. Belgium, Dr. W. C. Smallwood, Dr. C. S. Lipp, Dr. C. R. Blake, Dr. Marguerite Deininger-Keser; Dr. and Mrs. H. L. Carpenter; Dr. and Mrs. W. W. Frazer, and daughter; Dr. and Mrs. P. C. Campbell; Dr. and Mrs. U. S. Abbott; Dr. and Mrs. E. W. O'Brien; Dr.

and Mrs. C. L. Abbott, and Mrs. R. H. Crum, of Tiffin, O.; Dr. and Mrs. W. E. Cunningham.

Lieut. F. S. Cook, who is now at Linda Vista Camp, San Diego, sent a letter regretting that he could not be present at this meeting.

Captain I. B. March, of Monterey; Lieut. E. B. Fitzpatrick, of Martinez; and Lieut. Beard, of American Lake, were unable to be present.

No business was transacted by the Society at this meeting, except the annual election of officers.

FRESNO COUNTY.

Dr. W. W. Cross recently presented before the Fresno County Medical Society a resumé of the recent work at the Johns Hopkins Hospital by Cullen on Epithelial Tumors of the Mouth. A number of dentists were present by invitation. Dr. W. W. Cross recently returned from a year spent at Johns Hopkins and Mayo clinics.

Dr. A. O. Scarborough was admitted by transfer from the Scurry-Dickens-Kent Medical Society of Texas. Dr. Ira Wheeler was admitted by transfer from Sonoma County Society. Dr. E. L. Bennett was elected to membership. Dr. J. H. Robinson, of Selma, Cal., applied for admission.

Dr. W. L. Benedict, recently from Fresno, is now permanently located at the Mayo clinic, Rochester, Minn.

The sum of $10 monthly was appropriated to be used in the discretion of the board of governors in the relief of dependents of the "allies."

Arrangements were made to hold all future meeting at the University Club.

The Fresno County Medical Society met in the University Club quarters, December 4 last. The following members were elected to office for the year 1918:

President, Dr. C. D. Collins; First Vice-President, Dr. J. H. Pettis; Second Vice-President, Dr. G. L. Long; Secretary, Dr. C. O. Mitchell, incumbent; Assistant Secretary, Dr. W. E. R. Schottsteadt; Treasurer, Dr. T. M. Hayden, incumbent; to the Board of Governors, Dr. A. B. McConnell; Delegate to the State Medical Society, Dr. W. W. Cross; Alternate Delegate to the State Medical Society, Dr. W. T. Barr.

The sum of five dollars was donated to the Belgian Relief Society, also a like sum to the "Children of America's Army of Relief."

Dr. J. Harry Robinson, of Selma, was elected to membership in the society.

Dr. F. K. Pomeroy, graduate of Columbia University, and late of the New York Post Graduate School (resident physician six months, intern two years), licensed Calif., April, '17, made application for admission to this society.

An amendment to the Constitution was passed making the annual dues payable as follows: The first $7 not later than January 31, and the second installment not later than July 31 of each year, thus providing for the State Society's $7 before the same must be remitted by the County Society.

KERN COUNTY.

The regular meeting of the Kern County Medical Society was called to order by President Gundry, who presided for the first time in several months, having returned November 1 from the east. This was a joint meeting of the Medical Society and the Health Officers of Kern County, both city and local county deputies. The meeting was addressed by E. A. Ingham, S. B., C. P. H., State Health Officer, Southern District, with headquarters at Riverside. Dr. Ingham spoke on the general lines of the relation of the State District Health Officer to the local Health Officers in his district. He brought out the fact that in Kern County, in both cities and country, only one-third of one per cent. of the gross income was used for health purposes as against about four per cent., the proper rate.

LOS ANGELES COUNTY.

Eye and Ear Section.

The regular meeting of the Eye and Ear Section of the Los Angeles County Medical Association was held at the offices of Dr. H. J. Kiefer, 406 Brockman Building, Los Angeles, California, November 5, 1917, at 8:00 P. M.

Visitors: Drs. Sleeper, Earing, Merrell and Gage.

Attendance: Drs. Dudley, Brown, Detling, Griffith, Kiefer, Kelsey, Leffler, Geo. McCoy, R. W. Miller, Mills, Old, Reynolds, Stivers, Sweet, Stephenson, Swetnam, F. L. Rogers.

Minutes of previous meeting read and approved.

Report of case by Dr. George McCoy: Growth in nose, septal, in little girl, papillomatous, in the right side. Left side looked as if it had perforated. Brem and Zeiler report, Endothelioma. Dr. Rex Duncan gave seven exposures of radium, one every other day for two and one-half hours, no reaction until last one, then violent, nose swelled, last exposure last week of September. Now shows slight redness due to the radium. We do not know whether radium will or will not cure.

Second case, Carcinoma of Nose: Right antrum x-ray dark, microscopic examination not made here but in Phoenix. No mistake to judge by macroscopic appearance, radium applied into antrum through an opening. Two months later I examined and found no signs of it. Instructed her to report every six months.

Third case, Epithelioma of right lid: Was x-rayed by several men, now under radium. Lid is now scar tissue. Can see from lower lid into nose from burning of radium. Opinion is that neither radium nor surgery will cure. Has had three recurrences.

Dr. Mills: Did work along similar lines with Dr. Abbey of New York. He believes epithelioma of lids, especially near canthus, is amenable to surgical treatment. Dr. Abbey sorry he did not operate.

Dr. Dudley discussed "Experiences with Eustachian Catheterization." Catheterized eustachian tubes of woman produced emphysema, extended down into chest and around neck tissues. Gave her anodyne, hyoscyamus, valerian and camphor. Patient got better, did not see her next day. Patient felt two weeks later that it was going to her brain. I said it was impossible! Another specialist called in, said nothing more to do. Agreed with him.

Second case: Man catheterized for O. M. C. C. Emphysema occurred, vertigo, nausea, recovered.

Third case: Relapse from old case O. M. P. A. Gave boy some inflations, mucus in tubes, inflations caused some dizziness and vertigo. Gave nitroglycerin with good results. No roaring, no general anemia but believe caused a reflex spastic condition of anemia in the vicinity of the vestibule.

Dr. Sweet of Long Beach: Emphysema of cheek after tonsillectomy, disappearance O. K.

Dr. Lund: Caused double emphysema in a patient, also case of vertigo, by washing out cerumenous plug.

Dr. Stivers: Two cases emphysema. One Politzer. One compressed air.

Dr. Kelsey: Two cases emphysema, Politzer. Nystagmus and dizziness. One fainting case.

Dr. R. W. Miller: Two cases emphysema entirely in neck. One divided between neck and pharynx. Sepsis may occur. Saw case of dentist who caused emphysema in drying out tooth with compressed air.

Secretary announced that Dr. Powers wanted a physician to make cultures of meningococcus at San Pedro. Dr. Sweet of Long Beach volunteered.

Report of Committees on Membership: Secretary read report on Dr. Edwards. Dr. Sweet

moved, seconded by Dr. Mills, to make election of Dr. Edwards unanimous. Carried.

A special meeting of the Eye and Ear Section of the Los Angeles County Medical Association with the Clinical and Pathological Society was held in the hall on the 12th floor of the Brack Shops, 521-27 West Seventh street, Los Angeles, California, September 27, 1917, at 8:00 P. M.

Attendance: Drs. Bullard, Church, Old, Griffith, Harris, Graham, Tholen, Dudley, Dilworth, Sweet, Kelsey, Fleming, Sweet, Ellis, Kress, Lund, Hastings, Geo. McCoy, Stivers.

Visitors: Major Isaac H. Jones, M. R. C.

The Section was entertained by a combined program, consisting of cases and reports from the Clinical and Pathological Society and a lecture and demonstration on the vestibular tests for Aviation candidates, by Major I. H. Jones, who said in part:

"The Government wants an enormous number of aviators who must possess 20-20 vision without glasses and good hearing, besides passing all the regular tests for the draft army, and especially to possess normal vestibular and muscle balance which is determined by the use of Dr. Jones' modification of Barany's whirling chair. The tests are first for horizontal nystagmus which should last about 26 seconds, although a variation of 10 seconds is allowed, the nystagmus is taken after turning with closed eyes, first to the right 10 times in 20 seconds, then to the left in the same time, head forward 30 degrees.

"The second test is called Past-pointing and is a test which determines the integrity of the internal ear, vestibule, brain-stem, cerebellum and arm and shoulder muscles. The candidate is whirled with closed eyes first to the right 10 times in 10 seconds, head bent forward at an angle of 30 degrees. The chair is brought to a full stop and the candidate instructed to point with the arm first extended up over the head and then brought slowly down, attempting to touch the examiner's outstretched fore-finger.

"Normal past-pointing is to the right when candidate is turned to the right, and to the left when candidate is turned to the left.

"The Falling test is made with the candidate's head forward at an angle of 90 degrees, resting on his fists which are on his knees. With eyes closed the candidate is turned 5 times in 10 seconds to the right and then instructed to sit up straight in the chair when if he is normal he will fall over to the right. Then he is turned to the left and should fall to the left."

Dr. Jones described every possible variety of both normal and pathological conditions which might be present.

The Eye and Ear Section also gave a dinner at the University Club, complimentary to Major Jones, which twenty members besides several visitors attended. Dr. Jones announced that the examining unit for testing aviators would be formed soon in Los Angeles.

—

The Los Angeles County Medical Association had its first meeting of the season, October 14th, 1917. Dr. Granville MacGowan's subject was "Surgery of the Prostatic Urethra." Dr. Rex Duncan dwelt on "Radium in Gynecology" and Dr. Lulu N. Peters spoke pleasingly on "The Physician as an Educator." As usual the meeting was well attended and the informal luncheon brought colleagues in closer touch with one another. This social feature, no doubt, adds much to promote the fraternal spirit which the officers and councilors of the society have worked so hard to establish.

October 18, 1917, there was a clinical meeting at the County Hospital, held in the chapel, in charge of Assistant Medical Director Dr. J. Mark Lacey. Many interesting cases were presented and discussed.

November 1 the society met as usual in the Cafe Room of the Hamburger Building. A big audience listened with keen interest to an address by Nathaniel Bowditch Potter of New York and Santa Barbara on "Some Features of the Allen Treatment for Diabetes." He dwelt particularly on repeated fasting days until there is no sugar in the urine, to keep close watch for its reappearance, and to determine how many periodic fasting days the case may require. He also spoke of the importance of fat starvation to avoid diaceturia. No refreshments were served and members did not linger for the social hour.

The new method of electing officers, proposed by Dr. Kress, has been put in operation for the county election. The By-Law provides for a primary nominating ballot with three or more candidates for each office and a final election ballot of the two candidates receiving the highest number of votes.

November 15, 1917, the society had a unique and historic meeting for the discussion of "Military Surgery." Our chairman of the Committee on Scientific Program, Dr. Kress, has again proved to us all that his programs are not only interesting from a purely scientific standpoint, but are also preeminently apropos.

Members of the Navy in their natty blue uniforms contrasting markedly with the rough-and-tumble khaki of the Army Hospital units, and members of the profession in the Medical Reserve or other Medical Corps, altogether about sixty, sat facing their cheering colleagues of civil life, several hundred strong.

Dr. Chas. C. Browning, our president, was in the chair. Dr. Kress, the Secretary-Treasurer, capped the climax by raising the society's huge Service Flag dotted with stars, representing our fellow-members in service of our country.

Dr. E. C. Moore, member of the Southern California Section, Medical Division of the Council of National Defense, was the first to speak, the subject being "A Brief Report on the Recent National Conference."

Dr. Charles W. Anderson, another Los Angeles member, who has just completed a fourteen months' service in the Canadian Corps with the rank of Captain, gave "Some Observations of Military Surgery as seen in England and France."

Dr. A. Cronyn, Captain Canadian Army Medical Corps, while speaking of the life in the trenches and the most efficient methods of treating wounds, wove into his narrative quaint anecdotes full of humor and wit that kept his hearers in peals of applauding laughter.

Owing to the illness of his father, our fellow member, Dr. Rea Smith, Surgeon-Director of the Los Angeles Naval Hospital Unit, was not able to address the Society on this evening. His father, one of the oldest and best-known surgeons of Southern California has since died. The sympathy of the profession is with Dr. Rea Smith and his family in their loss.

The program concluded with patriotic songs led by Mr. George Towle and accompanied by all present with great enthusiasm.

Dr. Luther M. Powers, Chief of the Los Angeles City Health Department, is busy finding ways and means for the prevention of venereal diseases in this city. The Inebriate Home will be used as a detention house for women patients, and it is to be named "Los Feliz Hospital." The men are to be treated in the city jails. A corps of helpers, consisting of a man and a woman doctor and a

laboratory assistant for Wassermann and gonococci examinations, will be on the staff.

Dr. John R. Haynes, of Los Angeles, has been appointed sectional chairman for the Red Cross Christmas Membership Drive for Southern California. The district consists of Santa Barbara, San Bernardino, Los Angeles, Ventura, Orange, San Diego, Imperial, Riverside and San Luis Obispo Counties.

The Americanization and public health department of the State Council of Defense, of which Mrs. Frank A. Gibson is local chairman, with headquarters at 709 So. Hill Street, Los Angeles, has issued its first bulletin dealing with birth registration, infant mortality and the milk supply. Nearly all of the women's clubs are helping in this work.

Dr. Jno. Larrabee Pomeroy, Chief of the Los Angeles County Board of Health, has established a new division for the prevention and cure of venereal diseases among soldiers of this county. He is also cooperating with the civil authorities in this matter, and has appointed Dr. Allen L. Winter, recently of New York City and Paris, to take charge of this work. California is the first State and Los Angeles the first county of the State to have such a unit.

Women Physicians and the War.

At a meeting of the Los Angeles Branch of the Organization of Women Physicians for Federal Military Recognition, Dr. Lulu Peters, chairman, the Colorado Plan, which originated with Senator Saffroth and Dr. Mary Bates, was indorsed. The plan is that each suffrage State is to present to President Wilson for selection, the name of a woman physician eminently fitted physically, mentally and morally for military service. If approved by him, others are to apply. Surgeon-General Gorgas said that when there is great need, the women will undoubtedly receive positions the same as men. Drs. Eleanor Seymour and Etta Gray spoke at the meeting.

MENDOCINO COUNTY.

The November meeting was held at the Langland Hospital in Ukiah, on Saturday evening, the 10th. It was the most interesting of any we have had yet. The managers, the Misses Hilma E. Johanson and Theresa A. Kramer, had extended a cordial invitation to the society to take dinner and hold the meeting at their hospital.

The Misses Kramer and Johanson started the proceedings by entertaining the members and visiting M. D.'s at a lavish and palatable banquet that was pronounced one of the best ever attended. The society extended its vote of thanks to the managers.

Among those present were Drs. G. W. Stout, Ukiah; Frank S. Baxter, Willits; L. K. Van Allen, Ukiah; Melvin John Rowe, Talmage; Ida Malpas, Ukiah; L. L. Stanley, San Quentin, and S. L. Rea, Ukiah.

Dr. L. L. Stanley contributed an especially interesting paper on "The Medical Inspection of Prisoners at San Quentin, and Nasal Refracture."

Dr. Melvin John Rowe of the Mendocino State Hospital read an excellent and much appreciated paper on the "Classification of Delirium." Both papers were discussed by all present. The society voted appreciation and thanks to Drs. Rowe and Stanley.

Lieut. R. H. Hunt is still at San Pedro, taking fingerprints, etc.

Lieut. H. H. Wolfe is still taking long hikes from Allentown, Pa., to all points of the Keystone state.

Dr. H. O. Cleland is waiting for orders.

Dr. R. A. Babcock is at Camp Lewis.

SACRAMENTO COUNTY.

The regular meeting of the Sacramento Society for Medical Improvement was held Tuesday evening, November 20th, at the Sacramento High School Auditorium. This meeting took the form of a popular lecture to which the general public was invited. The regular order of business was dispensed with and no scientific program was arranged for.

Dr. T. W. Huntington delivered a very instructive and impressive address on the conditions found in the war hospitals of Europe and noted the degree of efficiency found in these military hospitals and also the need of support, especially in the form of supplies, most of which must come from America. The Auditorium seats about six hundred and every available seat was taken and standing room was at a premium. The ushers reported that several hundred were turned away.

SAN FRANCISCO COUNTY.

During the month of November, 1917, the following meetings were held:

Tuesday, November 6—Section on Medicine.

1. Demonstration of specimen: acute phlegmonous gastritis. Harold Brunn.
2. Asthma. René Bine.
3. Asthma in childhood, with special reference to its relationship with anaphylaxis. Harold K. Faber.
4. Spasmodic vasomotor disturbances of the respiratory tract, with special reference to hay fever. Preliminary report. Grant Selfridge.

Tuesday, November 13—General Meeting.

1. Glaucoma patients as a clinical problem. Hans Barkan.
2. Conditions found in England, France and Italy during the recent visit of the Red Cross Commission. T. W. Huntington.

Tuesday, November 20.

1. Report of two cases of lung abscess, with presentation of cases. Paul Campiche.
2. Some surgical aspects of the knee joint. J. T. Watkins.

Tuesday, November 27.

1. Presentation of cases.
   Hans Barkan:
   (a) Congenital malformation of lids, with small pupillary membrane.
   (b) Laceration of eyeball, with traumatic cataract.
   H. B. Graham:
   (c) Operation for depressed fracture of nose, followed by paraffin injection.
   (d) Report of case: Rib transplant into the nose, without rise of temperature or infection.
2. Plastic surgery of the nose and ears; with lantern demonstration. Grant Selfridge.
3. Nasal refractures; with lantern demonstrations. L. L. Stanley.
4. Plastics of the soft parts of the face. Leo Eloesser.

Base Hospital No. 30 Mobilized.

Base Hospital No. 30, organized in the University of California Medical Department, has been ordered to mobilize for training of enlisted personnel at Fort Mason, San Francisco, California. For this purpose, it has been placed under command of Col. Elmer A. Dean. Most of the officers of the organization have already had military training and at the present time are in active service in various parts of the country. Those ordered for immediate mobilization with the unit are:

Major Eugene S. Kilgore, Director and Chief of Medicine; Captains Jule B. Frankenheimer,

Louis P. Howe and Arthur L. Fisher, and Lieutenants Malcolm Goddard, Hiram E. Miller and John M. Rehfisch.

The remainder of the official personnel are to be assembled when the organization is ready for foreign service. These include:

Drs. Elbridge J. Best, Ernest H. Falconer, Arthur C. Gibson, C. R. Giles, Chas. M. Richards, Howard E. Ruggles, Hudson Smythe, Chas. L. Tranter, Herbert S. Thomson, William W. Washburn, Alanson Weeks, Nathan P. Wood, J. Homer Woolsey, Harold W. Wright.

University of California Men in Service.

Members of the staff of the University of California Medical School now in active service of the U. S. Army and Navy.

Professors—Herbert C. Moffitt, Major, Army, Fort Sam Houston, Texas. William Palmer Lucas, Army, Paris, France.

Assistant Clinical Professors—Eugene S. Kilgore, Major, Army, Presidio, San Francisco. Lionel S. Schmitt, Major, Army, Adjutant General's Office, San Francisco. James L. Whitney, Captain, Army, Camp Kearny, Linda Vista. Howard E. Ruggles, Army, Presidio Training Camp.

Instructors—Howard C. Naffsiger, Captain, Army, South Carolina. Walter I. Baldwin, Captain, Army, Edinburgh War Hospital, Scotland. Herbert S. Thomson, Captain, Army, Camp Kearny, Linda Vista. Leroy C. Abbott, Lieutenant, Army, War Office of Col. Robt. Jones, London, England. Louis P. Howe, Lieutenant, Army, 52nd Infantry, Presidio, San Francisco. Jule B. Frankenheimer, Captain, Army, Provisional Sanitary train, San Francisco. Alanson Weeks, Major, Army, Camp Lewis, Washington. Elbridge J. Best, Captain, Army, examining aviators, San Francisco. Ernest H. Falconer, Lieutenant, Army, Camp Kearny, Linda Vista. Frederick C. Lewitt, Lieutenant, Army, Presidio, San Francisco.

Assistants—John M. Rehfisch, Lieutenant, Army, Fort Mason, San Francisco. J. Homer Woolsey, Lieutenant, Army, Fort Oglethorpe, Georgia. Charles L. Tranter, Lieutenant, Army, Letterman General Hospital, San Francisco. Harold W. Wright, Lieutenant, Army, Presidio, San Francisco. Henry Horn, Captain, Army, examining aviators, San Francisco. Hugh K. Berkeley, Lieutenant, Army, Camp Kearny, Linda Vista. William W. Behlow, Lieutenant, Navy, Mare Island. C. F. Gelston, Army, Somewhere in France. Arthur L. Fisher, Lieutenant, Army, Fort Mason, San Francisco. Linton Gerdine, Navy, Peru.

Voluntary Assistants—Francis M. Shook, Navy. Arthur C. Gibson, Lieutenant, Army, Fort Riley, Kansas. Hudson Smythe, Lieutenant, Army, Fort Riley, Kansas.

Internes—Thomas Dunn, Navy. Frederick Linde, Lieutenant, Navy, Samoa. J. C. Ruddock, Navy. F. P. Brendel, Lieutenant, Army, Fort McDowell, Angel Island. M. L. Cohn, Navy, San Pedro, Cal. H. E. Miller, Lieutenant, Army, Fort Mason, San Francisco. E. R. Zumwalt, Lieutenant, Army, Fort McDowell, Angel Island.

SAN JOAQUIN COUNTY.

The regular monthly meeting of the San Joaquin County Medical Society was held Friday evening, November 20, at the Chamber of Commerce, President C. R. Harry presiding. Those present were Drs. B. F. Walker, W. F. Priestly, S. F. Priestly, J. T. Davison, J. D. Dameron, R. T. McGurk, W. T. McNeil, R. B. Knight, H. E. Sanderson, Minerva Goodman, Margaret Smyth, H. F. Bolinger, L. Dozier, R. R. Hammond, F. P. Clark, C. D. Holliger, C. R. Harry, E. B. Todd and D. R. Powell, with Dr. McCloskey and Dr. Cochrane of Stockton and Dr. Thomas W. Huntington of San Francisco as guests.

The talk of the evening was given by Dr. Huntington upon his personal observations in France and Italy, from which countries he had just returned. His observations were most instructive and the doctor's position as a member of the American Red Cross Commission had given him entry to every part of the line and his survey was most complete. He spoke of the tremendous numbers of wounded and the hundreds of hospitals and the remarkable coordination between the dressing stations in the trenches, the evacuation hospitals and the base hospitals. He was very complimentary of the excellent work of the Italian surgeons. He found the Italian hospitals fairly well equipped with materials and supplies. He also spoke of the remarkable work of Tizzone with his antitetanic serum.

SANTA BARBARA COUNTY.

Cottage Hospital Dispensary.

A dispensary was opened by the Santa Barbara Cottage Hospital on June 1 of this year. Its object is to co-operate with other public health agencies already established and to make medical advice and care possible to those who cannot pay for it, without overburdening physicians' offices with free patients.

The building, an attractive little bungalow, on Fourth avenue, was built and completely equipped as the gift of Mr. Geo. Owen Knapp. It contains a large receiving room and departments for the treatment of medical, surgical, eye and throat conditions. The dispensary is open from 1:30 to 2:30 P. M., Tuesdays and Fridays. Patients are admitted for free treatment upon recommendation of physicians or of reputable agencies or individuals. In cases where the patient seems able to pay in part, it is the endeavor of the dispensary to investigate the case, and if possible return the patient to his physician with the recommendation for leniency in charges, and the assurance of the co-operation of the dispensary and hospital departments in any medical or laboratory investigations he may desire to make.

A patient needing hospital care is admitted to the hospital and treated by the dispensary physician or surgeon. Laboratory and x-ray facilities of the hospital are at the disposal of the dispensary. These expenses as well as the operating expenses of the dispensary are at present charged to the fund for general relief, but it is hoped that a fund may be established to meet these special needs. It is also hoped that a social service worker may be procured who will be occupied in the investigation of patients, and in the following up of recommended treatments. At present that work is being done by the various social and health agencies in the city, as the cases are referred to them. This is possible as long as the number of members treated remain small. In the period of five months since its opening the dispensary has admitted 346 new cases and has given 670 treatments. 86 cases have been referred to the hospital.

The staff of the dispensary consists of Santa Barbara physicians and surgeons who each serves a definite term. The first services are as follows: Medical, Dr. Benj. Bakewell; surgical, Dr. W. H. Campbell; eye, Dr. L. R. Ryan; nose and throat, Dr. Geo. Wells.

A special clinic for the examination of cases suspected of tuberculosis, which may be referred from the medical department of the dispensary, is in charge of Dr. Nathaniel Bowditch Potter, and is held at 8:30 Friday morning.

Miss Pearl Howeth and Miss Clara Jones, two Santa Barbara nurses and members of Base Hospital No. 47, have been detailed to temporary duty at Camp Kearney, Linda Vista, Calif. Miss Beatrice Keogh has been sent to Beauregard, Alabama.

SISKIYOU COUNTY.

The Siskiyou County Medical Society held its regular quarterly meeting with the Drs. Tebbe at Weed, October 10. An interesting scientific program occupied most of the afternoon. Fourteen abnormal obstetric cases were reported by Dr. Hall of Hilt. An interesting case of tubal pregnancy diagnosed and afterward successfully operated upon, was reported by Dr. Nutting of Etna Mills.

After the scientific program, the Secretary, in behalf of the Society, presented Dr. Wm. Tebbe with an officer's wrist watch. Dr. Tebbe expects to be with the American forces in France in the very near future.

Resolutions were authorized on the death of Dr. C. W. Nutting who, until his recent death, had been the president of the County Society since its organization.

The members adjourned to the dining room where two hours were delightfully spent about a dinner with the Drs. Tebbe acting as hosts.

SONOMA COUNTY.

The Sonoma County Medical Society has elected the following officers for the year 1918: President, Dr. J. W. Cline; vice-president, Dr. Elizabeth M. Yates; secretary, Dr. N. R. H. Juell; treasurer, Dr. R. M. Bonar; censors, Dr. J. W. Kerr and Dr. F. E. Sohler; delegates to State Society meeting, Dr. M. B. McAuley, Dr. J. W. Scamell; alternates, Dr. F. O. Pryor, Dr. J. H. McLeod.

It was stated in the December issue of the Journal that Dr. J. W. Seawell had purchased the Santa Rosa Hospital from Dr. Temple, whereas the name should have been Dr. J. W. Scamell.

Dr. N. R. H. Juell has been appointed School Physician in Santa Rosa, and will devote all his time to school inspection and sanitation.

MILITARY NEWS

California Physicians in Service

Capt. Dr. Clark Lorenzo Abbott, 912 Macdonald Ave., Richmond, Cal.

Dr. Roy C. Abbott, 135 Stockton St., San Francisco, Cal.

Dr. Henry Abram, U. S. A., 135 Stockton St., San Francisco, Cal.

Dr. Bonnie O. Adams, Riverside, Cal.

Dr. C. B. Adams, Consolidated Realty Bldg., Los Angeles, Cal.

Dr. E. Von Adelung, 407 29th St., Oakland, Cal.

Dr. B. F. Alden, 126 Post St., San Francisco, Cal.

Dr. C. B. Alexander, 31 W. Main St., Alhambra, Los Angeles County, Cal.

Dr. Fred'k K. E. Allen, Box 448, Hayward, Cal.

Dr. Herbert Williams Allen, 240 Stockton St., San Francisco, Cal.

Lieut. Dr. W. B. Allen, Central Bank Bldg., Oakland, Cal.

Dr. S. M. Alter, 1759 Allesandro St., Los Angeles, Cal.

Dr. C. W. Anderson, Brockman Bldg., Los Angeles, Cal.

Dr. O. Anderson, Decatur Bldg., Ocean Park, Cal.

Dr. H. S. Anderton, Commercial Club Bldg., Burlingame, Cal.

1st Lieut. Dr. L. A. Anthony, Novato, Cal.

Capt. Dr. R. S. Anthony, Post Office Bldg., Los Gatos, Cal.

1st Lieut. Dr. Leonard Wood Atkinson, 611 First St., Napa, Cal.

Dr. R. W. Avery, Oxnard, Cal.

Dr. Raymond Babcock, Willits, Cal.

Dr. W. C. Baker, San Mateo, Cal.

Dr. C. Ballard, 1201½ Central Ave., Los Angeles, Cal.

Capt. Dr. A. E. Banks, Timken Bldg., San Diego, Cal.

Dr. J. Henry Barbat, 275 Post St., San Francisco, Cal.

Dr. Nathan P. Barbour, 391 Sutter St., San Francisco, Cal.

Dr. J. W. Bardill, 1221 Brand Blvd., Casa Verdugo, Cal.

Dr. Hans Barkan, 516 Sutter St., San Francisco, Cal.

1st Lieut. Dr. J. W. Barnes, I. O. O. F. Bldg., Marysville, Cal.

1st Lieut. Dr. Paul Barnes, Grass Valley, Cal.

Dr. Geo. De Forest Barnett, 2402 California St., San Francisco, Cal.

Dr. Gilbert M. Barrett, 275 Post St., San Francisco, Cal.

Dr. S. G. Bay, Hollingsworth Bldg., Los Angeles, Cal.

Dr. John L. Beard, Martinez, Cal.

Dr. S. O. Beasley, 240 Stockton St., San Francisco, Cal.

Capt. Dr. Wilfred F. Beerman, U. S. A., 135 Stockton St., San Francisco, Cal.

Dr. Irwin E. Bennett, 2903 Mission St., San Francisco, Cal.

Dr. Elbridge J. Best, 209 Post St., San Francisco, Cal.

Dr. James A. Black, 209 Post St., San Francisco, Cal.

Dr. W. O. Blanchar, 6130 Compton Ave., Los Angeles, Cal.

Dr. T. L. Blanchard, Bank of San Jose Bldg., San Jose, Cal.

Dr. Herbert I. Bloch, Physicians' Bldg., San Francisco, Cal.

Dr. Walter W. Boardman, Lane Hospital San Francisco, Cal.

Capt. Dr. Arthur Newton Bobbitt, Signal Corps, San Diego, Cal.

Dr. A. E. Boland, Needles, Cal.

Lieut. Dr. P. Boller, U. S. N., L A. Investment Bldg., Los Angeles, Cal.

Dr. K. M. Bonoff, 342 N. Main St., Los Angeles, Cal.

Dr. W. B. Bowman, Brockman Bldg., Los Angeles, Cal.

Dr. J. I. Boyer, 921 W. 12th St., Los Angeles, Cal.

Dr. R. W. Brace, U. S. A., Modesto, Cal.

Dr. W. V. Brem, Brockman Bldg., Los Angeles, Cal.

Dr. R. G. Brodrick, Supt, S. F. Hospital, San Francisco, Cal.

Dr. S. D. Brooks, 534 Wilcox Bldg., Los Angeles, Cal.

Dr. A. L. Brown, Michigan Bldg., Riverside, Cal.

Dr. Joseph Richard Brown, 166 Geary St., San Franicsco, Cal.

Dr. Philip King Brown, 516 Sutter St., San Francisco, Cal.

Dr. R. Brown, San Marcos Blk., Santa Barbara, Cal.

Dr. C. C. Browning, Merritt Bldg., Los Angeles, Cal.

Dr. F. M. Bruner, Ferndale, Cal.

Major Dr. Wm. A. Bryant, U. S. A., 2113 Broderick St., San Francisco, Cal.

Dr. John R. Buckingham, Gregg Bldg., Big Pine, Cal.

1st Lieut. Dr. G. M. Bumgarner, Brower Bldg., Bakersfield, Cal.

Capt. Dr. Sterling Bunnell, 516 Sutter St., San Francisco, Cal.

Dr. G. W. Burgess, Saratoga, Cal.

Jr. Lieut. Dr. E. E. Burk, U. S. N., Grant Bldg., Los Angeles, Cal.

1st Lieut. Dr. Edw. Wilbur Burke, Masonic Temple, Redlands, Cal.

Dr. J. M. Burlew, Santa Ana, Cal.

Dr. W. W. Purnell, 1225 Washington St., Oakland, Cal.

Lieut. Dr. Edmund Butler, U. S. N., 135 Stockton St., San Francisco, Cal.

Dr. F. O. Butler, Eldridge, Cal.

Dr. O. W. Butler, L. A. County Hospital, Los Angeles, Cal.

Capt. Dr. A. H. Byars, Watts Bldg., San Diego, Cal.

Dr. Ralph L. Byrnes, Merritt Bldg., Los Angeles, Cal.

Dr. R. Cadwallader, 240 Stockton St., San Francisco, Cal.

1st Lieut. Dr. Wm. J. Caesar, 2135 Sacramento St., San Francisco, Cal.

Dr. John W. Callnon, U. S. A., San Bernardino, Cal.

1st Lieut. Dr. H. McD. Cameron, Elks Bldg., Sacramento, Cal.

Dr. E. O. Campbell, R. F. D. No. 2, Santa Barbara, Cal.

Dr. P. C. Campbell, 213 Richmond Ave., Richmond, Cal.

Dr. Jno. Carling, Black Bldg., Los Angeles, Cal.

Dr. Frank B. Carpenter, 209 Post St., San Francisco, Cal.

Dr. R. A. Carter, 2711 Central Ave., Los Angeles, Cal.

Lieut. Dr. R. S. Carter, U. S. A., Timken Bldg., San Diego, Cal.

1st Lieut. Dr. Ervin J. Casper, 162 Post St., San Francisco, Cal.

Lieut. Dr. Joseph Henry Catton, 177 Post St., San Francisco, Cal.

Dr. W. Edward Chamberlain, 233 Post St., San Francisco, Cal.
Dr. W. E. Chambers, 1st Nat. Bk. Bldg., Oakland, Cal.
Dr. W. J. Chambers, Fay Bldg., Los Angeles, Cal.
1st Lieut. Dr. O. D. Chamley, Box 901, R. F. D. No. 2, San Gabriel, Cal.
Dr. P. S. Chancellor, San Marcos Bldg., Santa Barbara, Cal.
1st Lieut. Dr. Harvey P. Charles, 2168 Shattuck Ave., Berkeley, Cal.
Lieut. Dr. A. T. Charlton, U. S. N., Brockman Bldg., Los Angeles, Cal.
Dr. Jas. F. Churchill, U. S. N., Timken Bldg., San Diego, Cal.
Dr. V. G. Clark, 4th and Elm Sts., San Diego, Cal.
Capt. Dr. William R. P. Clark, U. S. A., 240 Stockton St., San Francisco, Cal.
Dr. H. O. Cleland, Ukiah, Cal.
Dr. H. X. Cline, 149 San Fernando Blvd., Burbank, Cal.
Dr. M. M. Cloud, Brosse Bldg., Los Angeles, Cal.
Dr. L. B. Coblentz, Santa Maria, Cal.
Lieut. Dr. G. Cochran, U. S. N., Pacific Electric Bldg., Los Angeles, Cal.
Dr. Albert Cohen, 146 Grant Ave., San Francisco, Cal.
Dr. Earl H. Coleman, Fallen Leaf Lodge, Lake Tahoe, Cal.
Lieut. Dr. Frederick A. Coller, U. S. A., 658 W. Jefferson St., Los Angeles, Cal.
Dr. J. D. Condit, St. Louis Blk., Pasadena, Cal.
Dr. J. M. Conerty, Hibernia Bldg., Los Angeles, Cal.
Dr. C. P. Conroy, 700 San Vicente Blvd., Santa Monica, Cal.
Dr. G. M. Converse, 1085 Mission St., San Francisco, Cal.
1st Lieut. Dr. F. S. Cook, U. S. A., Brentwood, Cal.
1st Lieut. Dr. W. E. Coppedge, Alturas, Cal.
Dr. G. T. Courtenay, U. S. N., Timken Bldg., San Diego, Cal.
Lieut. Dr. J. R. Cowan, U. S. N., Mer. Nat. Bank Bldg., Los Angeles, Cal.
Dr. Roy M. Cox, San Luis Obispo, Cal.
Lieut. Commander Dr. E. L. Crispin, Mer. Nat. Bank Bldg., Los Angeles, Cal.
Dr. Charles Cross, 275 Post St., San Francisco, Cal.
Jr. Lieut. Dr. J. W. Crossman, U. S. N., 424 S. Broadway, Los Angeles, Cal.
Dr. A. H. Curric, Grosse Bldg., Los Angeles, Cal.
Dr. C. F. Curtis, 6523 Hollywood Blvd., Los Angeles, Cal.
Dr. Wm. Hardy Daniel, Sisters' Hospital, Los Angeles, Cal.
Dr. Arthur L. Davis, 86 Post St., San Francisco, Cal.
Dr. C. W. Decker, Marsh-Strong Bldg., Los Angeles, Cal.
1st Lieut. Dr. Victor D'Ercole, 303A Columbus Ave., San Francisco.
Dr. C. F. Dickenson, Rowell Bldg., Fresno Cal.
Jr. Lieut. Dr. Albert Robb Dickson, U. S. N., 1414 S. Hope St., Los Angeles, Cal.
Dr. E. H. Diehl, N. Main St., Artesia, Cal.
1st Lieut. Dr. A. B. Dienenbrock, 2315 M St., Sacramento, Cal.
Dr. H. H. Dignan, 275 Post St., San Francisco, Cal.
Dr. G. P. Dillon, Ochsner Bldg., Sacramento, Cal.
Dr. F. J. Dingeman, Watts Bldg., San Diego, Cal.
1st Lieut. Howard Dixon, M. D., 420 Mission Road, Daly City, San Mateo Co., Cal.
Dr. R. M. Dodsworth, 451 W. Ocean Ave., Long Beach, Cal.
1st Lieut. Dr. Paul E. Dolan, Livermore, Cal.
Dr. R. H. Donnell, U. S. N., American Nat. Bk. Bldg., San Diego, Cal.
Dr. R. J. Dowdall, 240 Stockton St., San Francisco, Cal.
Lieut. Dr. S. R. Downing, U. S. A., Berkeley Nat. Bk. Bldg., Berkeley, Cal.
Dr. E. Dozier, U. S. A., Masonic Bldg., Redding, Cal.
Dr. R. C. Dufficy, McNear-Cochrane Bldg., San Rafael, Cal.
Dr. F. Dunlap, Brawley, Cal.
Dr. W. L. Dunn, 3026 Grove St., Oakland, Cal.
Dr. D. Dwire, San Pedro Bank Bldg., San Pedro, Cal.
Dr. F. B. Dwire, Palm Ave., Gardena, Cal.
Dr. A. E. Edgerton, Elks Bldg., Stockton, Cal.
Dr. Henry Ehlers, Fowler, Cal.
Dr. W. L. Ellis, Calexico, Cal.
Major Dr. Leo Elocsser, 135 Stockton St., San Francisco, Cal.
Capt. Dr. Leonard W. Ely, Lane Hospital, San Francisco, Cal.
Dr. Michael H. Etcheverry, 391 Sutter St., San Francisco, Cal.
Dr. G. H. Evans, 233 Post St., San Francisco, Cal.
Dr. Joseph Gamewell Evans, Hotel Clark, Los Angeles, Cal.
Dr. F. D. Fairchild, U. S. A., 4521 Central Ave., Los Angeles, Cal.
Dr. Fred. R. Fairchild, Woodland, Cal.
Dr. E. H. Falconer, 516 Sutter St., San Francisco, Cal.
Dr. G. H. Fay, East Auburn, Cal.
Lieut. Dr. J. C. Ferbert, U. S. N., 222 Bradbury Bldg., Los Angeles, Cal.
Dr. D. B. Fields, Weaverville, Cal.
Dr. A. P. Finan, Suisun, Cal.
Dr. H. M. Fine, Physicians' Bldg., Oakland, Cal.
Dr. E. S. Fish, U. S. A., Laughlin Bldg., Los Angeles, Cal.
Capt. Dr. A. L. Fisher, U. S. A., 126 Stockton St., San Francisco, Cal.
1st Lieut. Dr. E. B. Fitzpatrick, Martinez, Cal.
1st Lieut. Cuthbert Fleissner, M. D., Galen Bldg., San Francisco, Cal.
Dr. O. P. Floreth, Dixon, Cal.
Lieut. Dr. Harry E. Foster, U. S. A., The Cutter Laboratory, Berkeley, Cal.
Dr. H. Ed. Franck, 5464 College Ave., Oakland, Cal.
Capt. Dr. J. B. Frankenheimer, U. S. A., 240 Stockton St., San Francisco, Cal.
Dr. Blake Franklin, Lemoore, Cal.
Dr. J. H. Franklin, Guadalupe, Cal.
1st Lieut. Dr. L. A. Frary, 5250 Desmond St., Oakland, Cal.
Dr. M. W. Fraser, U. S. A., Lemoncove, Cal.
Dr. W. Friedberger, Theater Bldg., Stockton, Cal.
Dr. Lowell C. Frost, 6422 Hollywood Blvd., Los Angeles, Cal.
Dr. H. M. Gallagher, Marsh-Strong Bldg., Los Angeles, Cal.
Dr. J. T. Gardner, Santa Margarita, Cal.
Capt. Dr. C. L. Garvin, Randsburg, Cal.
Cant. Dr. F. M. Gedney, 1940 Scott St., San Francisco, Cal.
1st Lieut. Dr. Clain F. Gelston, University Hospital, San Francisco.
1st Lieut. Dr. Edw. G. Ghidella, 460 Columbus Ave., San Francisco.
Dr. M. R. Gibbons, 350 Post St., San Francisco, Cal.
Dr. A. Gibson, Alturas, Cal.
Dr. P. K. Gilman, 350 Post St., San Francisco, Cal.
Capt. Dr. F. R. Girard, U. S. A., 240 Stockton St., San Francisco, Cal.
Dr. C. A. Glover, 126 Stockton St., San Francisco, Cal.
Dr. L. J. E. Gouguet, Morehead Bldg., Chico, Cal.
Capt. Dr. Joseph Foster Grant, Spreckels Bldg., San Diego, Cal.
Dr. A. E. Gray, Marysville, Cal.
Dr. J. Green, 133 Geary St., San Francisco, Cal.
Dr. Earl Greenwood, St. Francis Hospital, San Francisco, Cal.
Dr. Chas. F. Griffin, 2804 Folsom St., San Francisco, Cal.
Dr. H. Gunn, 240 Stockton St., San Francisco, Cal.
Dr. S. L. Haas, 210 Post St., San Francisco, Cal.
Dr. W. J. Haber, 177 Post St., San Francisco, Cal.
Dr. Robt. Kells Hackett, 1752½ N. Vermont Ave., Los Angeles, Cal.
Dr. R. Hagan, Broadway Cen. Bk. Bldg., Los Angeles, Cal.
1st Lieut. Dr. Nathan George Hale, Capital Nat. Bk. Bldg., Sacramento, Cal.
1st Lieut. Dr. C. Hall, 7th and Henry Sts., Oakland, Cal.
Capt. Dr. J. U. Hall, Theater Bldg., San Jose, Cal.
Lieut. Dr. J. K. Hamilton, U. S. A., Encinal Hall, Bay Station, Alameda, Cal.
Dr. M. P. Hamrick, R. F. D. No. 3, Anaheim, Cal.
Dr. M. C. Harding, Timken Bldg., San Diego, Cal.
Dr. C. B. Hare, Bank of San Jose Bldg., San Jose, Cal.
Dr. C. S. Harris, U. S. A., 209 Post St., San Francisco, Cal.
Dr. Frank R. Hart, Pacific Grove, Cal.
Dr. L. Hart, Title Ins. Bldg., Los Angeles, Cal.
Dr. Ernest D. Hatch, 1030 Post St., San Francisco, Cal.
Dr. G. G. Hawkins, Ione, Cal.
Dr. B. F. Hayden, Soldiers' Home, Los Angeles, Cal.
Dr. Geo. L. Helms, 2404 Washington St., San Francisco, Cal.
Dr. G. S. Herbert, Santa Paula, Cal.
Dr. G. K. Herzog, 133 Geary St., San Francisco, Cal.
Dr. A. W. Hewlett, Lane Hospital, San Francisco, Cal.
Dr. O. H. Hoag, 3307 Mission St., San Francisco, Cal.
Dr. C. L. Hoag, 126 Stockton St., San Francisco, Cal.
Dr. H. V. Hoffman, 210 Post St., San Francisco, Cal.
Dr. R. L. Hogg, Saratoga, Cal.
Dr. Henry A. Hoit, 1818 Walworth Ave., Pasadena, Cal.
Dr. Rufus A. Holt, 1329 Crown Hill Ave., Los Angeles, Cal.
Jr. Lieut. Dr. R. W. Homer, U. S. N., Ventura, Cal.
Dr. H. Horn, 209 Post St., San Francisco, Cal.
Dr. W. J. Hosford, 1410 Park Ave., Alameda, Cal.
Dr. G. Hoskins, Ferndale, Cal.
Dr. A. J. Houston, 350 Post St., San Francisco, Cal.
Dr. E. C. Houston, Bieber, Cal.
Capt. Dr. L. P. Howe, 516 Sutter St., San Francisco, Cal.
Dr. Edgar H. Howell, 209 Post St., San Francisco, Cal.
Dr. Walter O. Howell, 3802 Mission St., San Francisco, Cal.
Dr. A. B. Hromadka, Bank Bldg., Sawtelle, Cal.
Dr. G. M. Hubbell, Los Gatos, Cal.
Dr. G. R. Hubbell, U. S. A., 516 Sutter St., San Francisco, Cal.
Dr. S. J. Hunkin, 1155 Bush St., San Francisco, Cal.
Dr. T. W. Huntington, 516 Sutter St., San Francisco, Cal.
Dr. R. K. Hutchings, Head Bldg., San Francisco, Cal.
Dr. O. C. Hyde, Lincoln, Cal.
Dr. T. G. Inman, 240 Stockton St., San Francisco, Cal.
Capt. Dr. R. B. Irones, U. S. A., Timken Bldg., San Diego, Cal.
Dr. John C. Irwin, Hollingsworth Bldg., Los Angeles, Cal.
Dr. Benj. Jablons, St. Francis Hospital, San Francisco, Cal.
Dr. P. K. Jackson, San Luis Obispo, Cal.
1st Lieut. Dr. Wm. J. Jackson, 1511 Masonic Ave., San Francisco.
Dr. M. D. W. Jeffs, 3519 Central Ave., Los Angeles, Cal.
Dr. E. O. Jellinek, 135 Stockton St., San Francisco, Cal.
Dr. C. A. Johnson, L. A. Investment Bldg., Los Angeles, Cal.
Dr. L. R. Johnson, Com. & Sav. Bk. Bldg., Stockton, Cal.
Dr. W. S. Johnson, 350 Post St., San Francisco, Cal.
Dr. J. R. Jones, Yreka, Cal.
Dr. R. M. Jones, Jr., Rowell Bldg., Fresno, Cal.
Dr. J. J. Kavanagh, 210 Post St., San Francisco, Cal.
Dr. C. W. Kellogg, Hopkins Bldg., Bakersfield, Cal.
Dr. P. S. Kellogg, Norwalk, Cal.
Dr. M. R. Kennedy, Eagleville, Cal.
Dr. J. T. Kergan, 1225 Washington St., Oakland, Cal.
Dr. A. N. Kerr, Hawthorne, Hawthorne and Raymond, Cal.
Dr. W. J. Kerr, Bodega Ave., Sebastopol, Cal.
Dr. Henry S. Keyes, 803 Macy St., Los Angeles, Cal.

Dr. H. N. Kierulff, 2601 Fulton St., Berkeley, Cal.
Major Dr. E. S. Kilgore, University Hospital, San Francisco, Cal.
Dr. L. C. Kinney, 415 Elm St., San Diego, Cal.
Major Dr. W. L. Kneedler, Coronado, Cal.
Dr. H. H. Koons, Brockman Bldg., Los Angeles, Cal.
Dr. F. W. Kroll, 240 Stockton St., San Francisco, Cal.
Dr. Harry Peter Krummes, U. S. N., 291 Geary St., San Francisco, Cal.
Dr. J. J. Kyle, Title Ins. Bldg., Los Angeles, Cal.
Dr. Harry L. Langnecker, Lane Hospital, San Francisco, Cal.
1st Lieut. Dr. F. M. Lawson, Barceloux Bldg., Willows, Cal.
Dr. Robert T. Legge, 3016 Benvenue Ave., Berkeley, Cal.
Dr. L. M. Leisenring, Placerville, Cal.
Dr. T. B. Leland, U. S. N., 86 Post St., San Francisco, Cal.
Dr. Walter E. Leonard, Marsh-Strong Bldg., Los Angeles, Cal.
Major Dr. C. G. Levison, U. S. A., Physicians Bldg., San Francisco, Cal.
Dr. C. E. Lewis, Calistoga, Cal.
Dr. W. J. Lewis, 310 California St., Ventura, Cal.
Dr. T. C. Little, U. S. N., American Nat. Bk. Bldg., San Diego, Cal.
Dr. Chas. D. Lockwood, Wadsworth Bldg., Pasadena, Cal.
Major Dr. Edw. S. Loizeaux, 903 I St., Sacramento, Cal.
1st Lieut. Dr. Melville H. Long, 21 Buena Vista Ave., San Francisco, Cal.
Capt. Dr. S. M. Long, 435 J St., Fresno, Cal.
Dr. T. S. Long, Cambria, Cal.
Major Dr. H. C. Loos, Timken Bldg., San Diego, Cal.
Dr. F. K. Lord, Camptonville, Cal.
Dr. C. H. Lowell, Union Oil Bldg., Los Angeles, Cal.
Dr. Jas. B. Luckie, Dodworth Bldg., Pasadena, Cal.
Dr. W. T. Lum, 1361 Park Ave., Alameda, Cal.
Dr. J. G. Lynch, Baker-Detwiler Bldg., Los Angeles, Cal.
Dr. Wm. Carston Lynch, Niles, Cal.
Capt. Dr. G. J. McChesney, U. S. A., 350 Post St., San Francisco, Cal.
Dr. C. L. McClish, 1760 W. Adams St., Los Angeles, Cal.
Dr. A. D. S. McCoy, Slavin Bldg., Pasadena, Cal.
Dr. F. E. McCullough, Lincoln, Cal.
Dr. A. B. McKee, U. S. N., Flood Bldg., San Francisco.
Capt. Dr. A. C. McKenney, U. S. A., 126 Stockton St., San Francisco, Cal.
Dr. J. E. McKillop, Main and Walnut Sts., Huntington Beach, Cal.
Dr. A. D. McLean, Exeter, Cal.
Dr. F. P. McManus, Hercules, Cal.
Dr. W. F. McNutt, Jr., 135 Stockton St., San Francisco, Cal.
Dr. G. C. H. McPheeters, Leighton Bldg., Riverside, Cal.
Dr. D. M. McRae, Wayne Apts., Telegraph Ave., Oakland, Cal.
Dr. L. R. Mace, 1244 Gardner St., Hollywood, Cal.
Dr. C. W. Mack, Livermore, Cal.
Dr. A. C. Macleish, Brockman Bldg., Los Angeles, Cal.
Lieut. Dr. A. C. Magee, Watts Bldg., San Diego, Cal.
Dr. O. L. Magee, El Monte, Cal.
1st Lieut. Dr. A. F. Maine, Dalziel Bldg., Oakland, Cal.
Dr. F. R. Makinson, Thomson Bldg., Oakland, Cal.
Dr. F. A. Makinson, Thomson Bldg., Oakland, Cal.
Lieut. Dr. S. H. Marks, U. S. A., Pittsburg, Cal.
Dr. M. Y. Marshall, Bakersfield, Cal.
Dr. D. L. Martin, Hicks Bldg., Orland, Cal.
Dr. E. E. Martin, Gridley, Cal.
Dr. H. G. Marxmiller, Baker-Detwiler Bldg., Los Angeles, Cal.
Dr. F. C. E. Mattison, Cham. of Com. Bldg., Pasadena, Cal.
Dr. S. J. Mattison, Citizens' Sav. Bk. Bldg., Pasadena, Cal.
Dr. A. M. Meads, Thomson Bldg., Oakland, Cal.
Dr. Benj. E. Merrill, 128 N. 10th St., Santa Paula, Cal.
Dr. J. A. Metzger, 327 Carroll Park, Long Beach, Cal.
Dr. W. P. Milliken, 3858 Howe St., Oakland, Cal.
Dr. A. L. Miller, Marysville, Cal.
Dr. Byron Young Miller, San Luis Obispo, Cal.
Lieut. Dr. F. W. Miller, U. S. N., Mer. Nat. Bk. Bldg., Los Angeles, Cal.
1st Lieut. Dr. Sol. C. Mish, 111 Ellis St., San Francisco, Cal.
Dr. P. A. Mix, Exeter, Cal.
1st Lieut. Dr. G. H. Mize, 146 Grant Ave., San Francisco, Cal.
Dr. H. C. Moffitt, U. S. A., 240 Stockton St., San Francisco, Cal.
Dr. E. C. Moore, Mer. Nat. Bk. Bldg., Los Angeles, Cal.
Dr. H. S. Moore, 209 Post St., San Francisco, Cal.
Dr. J. R. Moore, Brockman Bldg., Los Angeles, Cal.
Dr. Wm. L. Moore, 2421 Sutter St., San Francisco, Cal.
Dr. W. D. Moore, Anderson Bldg., San Pedro, Cal.
Dr. Chas. E. Mordoff, c/o S. Cal. Edison Co., Kernville, Cal.
1st Lieut. Dr. Jas. W. Morgan, 848 10th St., Modesto, Cal.
Dr. N. D. Morgan, 135 Stockton St., San Francisco, Cal.
Dr. Chas. Lynn Morris, San Dimas, Cal.
Dr. H. E. Morrison, Dixon, Cal.
Dr. N. D. Morrison, 273 B St., San Mateo, Cal.
Dr. W. A. Morrison, Kerckhoff Bldg., Los Angeles, Cal.
1st Lieut. Dr. Geo. Morton, 215 Kearny St., San Francisco, Cal.
Lieut. Dr. L. B. Morton, U. S. N., Brockman Bldg., Los Angeles, Cal.
Dr. J. Mora Moss, 146 Grant Ave., San Francisco, Cal.
Dr. F. W. Muller, Sefton Bldg., San Diego, Cal.
1st Lieut. Dr. A. L. Munger, Jr., 1021 10th St., Sacramento, Cal.
Dr. Vance Bishop Murray, U. S. Marine Hospital, San Francisco, Cal.
Dr. A. J. Murrieta, Brockman Bldg., Los Angeles, Cal.
Dr. H. C. Naffziger, 291 Geary St., San Francisco, Cal.
Dr. E. A. Newton, Marsh-Strong Bldg., Los Angeles, Cal.
Dr. John G. Norman, Alleghany, Cal.
Dr. O. D. Norton, U. S. N., Santa Barbara, Cal.
1st Lieut. Dr. H. P. Nottage, 1361 Park St., Alameda, Cal.
Dr. J. T. O'Brien, 803 Kentucky St., Petaluma, Cal.
Dr. Earl Wm. O'Donnell, U. S. A., 203 Church St., San Francisco, Cal.
Dr. F. J. T. Old, Baker-Detwiler Bldg., Los Angeles, Cal.
Jr. Lieut. Dr. W. H. Olds, Consolidated Realty Bldg., Los Angeles, Cal.
Major Dr. H. R. Oliver, 135 Stockton St., San Francisco, Cal.
Dr. Bernard J. O'Neill, U. S. N., Amer. Nat. Bk. Bldg., San Diego, Cal.
Dr. T. J. Orbison, Brockman Bldg., Los Angeles, Cal.
Dr. T. W. O'Reilly, Baker-Detwiler Bldg., Los Angeles, Cal.
Dr. Carl S. Owen, 1206 National Ave., National City, Cal.
Dr. J. C. Paine, Exeter, Cal.
Dr. H. P. Palmer, Vacaville, Cal.
Jr. Lieut. Dr. Victor Parkin, U. S. N., Patton, Cal.
1st Lieut. Dr. J. H. Parkinson, 1005 K St., Sacramento, Cal.
Dr. R. H. Parkinson, 391 Sutter St. San Francisco, Cal.
Capt. Dr. J. A. Parks, U. S. A., La Mesa, Cal.
Dr. A. Patterson, Mountain View, Cal.
Dr. John E. Paulson, San Quentin, Cal.
Dr. C. A. Pauson, 350 Post St., San Francisco, Cal.
1st Lieut. Dr. S. Z. Peoples, 159 Kentucky St., Petaluma, Cal.
Dr. L. G. Petch, Weaverville, Cal.
Lieut. Dr. T. R. Petch, Connick & Sinclair Bldg., Eureka, Cal.
Dr. E. A. Peterson, 321 Georgia St., Vallejo, Cal.
Dr. C. Pius, Montague, Cal.
1st Lieut. Dr. V. H. Podstata, Livermore, Cal.
Dr. J. L. Pomeroy, County Court House, Los Angeles, Cal.
Dr. G. S. Porter, 227 W. 40th Pl., Los Angeles, Cal.
Dr. L. Porter, 240 Stockton St., San Francisco, Cal.
Dr. T. C. Pounds, U. S. N., Amer. Nat. Bk. Bldg., San Diego, Cal.
Dr. A. Powell, Thayer Bldg., Oakland, Cal.
Dr. H. D. Power, 240 Stockton St., San Francisco, Cal.
Dr. L. D. Prince, 350 Post St., San Francisco, Cal.
Lieut. Dr. J. F. Pruett, 516 Sutter St., San Francisco, Cal.
Dr. W. E. Purviance, 742 Kingsley Drive, Los Angeles, Cal.
Dr. V. E. Putnam, 290 Divisadero St., San Francisco, Cal.
Dr. C. Quinan, 391 Sutter St., San Francisco, Cal.
Dr. J. K. Ransom, Newman, Cal.
Capt. Dr. W. R. Ream, Watts Bldg., San Diego, Cal.
Dr. F. B. Reardan, Box 203, Turlock, Cal.
Dr. W. A. Reed, Covina, Cal.
1st Lieut. Dr. W. P. Reeves, Spreckels, Cal.
Lieut. Dr. John Morse Rehfisch, U. S. A., Dept. of Pathology, University of California, Berkeley, Cal.
Dr. A. H. Reinstein, 146 Grant Ave., San Francisco, Cal.
Dr. L. D. Remington, Monrovia Sav. Bk. Bldg., Monrovia, Cal.
Dr. Jas. R. Reuling, Jr., S. F. Hospital, San Francisco, Cal.
Capt. Dr. H. B. Reynolds, U. S. A., Frazer Bldg., Palo Alto, Cal.
Dr. C. M. Richards, Garden City Bank Bldg., San Jose, Cal.
Capt. Dr. G. H. Richardson, 2917 Clay St., San Francisco, Cal.
Lieut. Dr. W. W. Richardson, U. S. A., Brockman Bldg., Los Angeles, Cal.
Dr. J. J. Richstein, 391 Sutter St., San Francisco, Cal.
Dr. Robt. L. Rierson, 1540 San Pablo Ave., Oakland, Cal.
Dr. E. Rixford, U. S. N., 1795 California St., San Francisco, Cal.
Dr. B. Robbins, Hanford, Cal.
Dr. W. H. Roberts, 461 E. Colorado St., Pasadena, Cal.
Dr. W. W. Roblee, Glenwood Blk., Riverside, Cal.
Dr. Alexander S. Rochester, 414 Laughlin Bldg., Los Angeles, Cal.
Dr. Wm. Donald Rolph, 764 Main St., Riverside, Cal.
Dr. G. Rothganger, 4501 San Pablo Ave., Oakland, Cal.
Dr. H. E. Ruggles, 233 Post St., San Francisco, Cal.
Dr. Wm. Ashford Sampson, U. S. A., 350 Post St., San Francisco, Cal.
Dr. L. B. Sandall, U. S. Indian Service, Santa Ysabel, Cal.
1st Lieut. Dr. J. P. Sandholt, Kennett, Cal.
Dr. B. F. Sandow, 297 Lee St., Oakland, Cal.
Dr. L. J. Schermerhorn, Belding Bldg., Stockton, Cal.
Dr. H. J. Schlageter, 240 Stockton St., San Francisco, Cal.
Dr. L. S. Schmitt, 135 Stockton St., San Francisco, Cal.
Dr. C. E. Schoff, Davis, Cal.
Dr. Chas. Edw. Schwartz, 246 Powell St., San Francisco, Cal.
Dr. W. R. Scroggs, Pillow Bldg., Richmond, Cal.
Dr. H. W. Seager, L. A. Investment Bldg., Los Angeles, Cal.
Dr. F. M. Seibert, Mayfield, Cal.
Dr. Martin J. Seid, Alcatraz Island, Cal.
Dr. L. G. Seidenfeld, French Hospital, San Francisco, Cal.
Dr. G. W. Sevenman, 27 Griffith St., San Mateo, Cal.
1st Lieut. Dr. M. A. Shade, 1st Sav. Bk. Bldg., Oakland, Cal.
Dr. B. Shelton, 5th and E Sts., San Diego, Cal.
Dr. H. M. Sherman, 350 Post St., San Francisco, Cal.
Dr. H. H. Sherk, 268 S. Orange Grove Ave., Pasadena, Cal.
Dr. G. F. Shields, 291 Geary St., San Francisco, Cal.
Dr. J. W. Shields, Physicians Bldg., San Francisco, Cal.
Dr. R. H. Shippey, U. S. A., 1135 Chestnut St., Long Beach, Cal.
Dr. E. D. Shortlidge, 209 Post St., San Francisco, Cal.
Dr. L. Shulman, 845 S. Hill St., Los Angeles, Cal.

Major Dr. H. Sidebotham, U. S. A., 1936 Laguna St., Santa Barbara, Cal.
Dr. C. A. Smalley, Wright & Callender Bldg., Los Angeles, Cal.
Capt. Dr. R. Smart, U. S. A., 1100 8th St., Coronado, Cal.
Dr. A. C. Smiley, Venice, Cal.
Dr. A. W. Smith, Y. M. C. A. Bldg., Pasadena, Cal.
Dr. C. E. Smith, Oakdale, Cal.
Dr. F. J. Smith, Point Loma, Cal.
Dr. John J. Smith, Head Bldg., Post and Grant Ave., San Francisco, Cal.
Dr. Lynn C. Smith, Madeline, Cal.
Dr. R. Smith, U. S. N., Brockman Bldg., Los Angeles, Cal.
Dr. R. L. I. Smith, 40 E. Colorado St., Pasadena, Cal.
Dr. H. Smythe, Com. & Sav. Bk. Bldg., Stockton, Cal.
Capt. Dr. A. D. Snyder, Corning, Cal.
Dr. G. S. Snyder, 210 Post St., San Francisco, Cal.
Dr. A. Soiland, 527 W. 7th St., Los Angeles, Cal.
Dr. J. B. Spalding, 246 Powell St., San Francisco, Cal.
Dr. F. F. Sprague, Los Banos, Cal.
Dr. Ed. F. Stadtherr, 208-14 San Jose B. B., San Jose, Cal.
Dr. K. J. Staniford, Rowell Bldg., Fresno, Cal.
Dr. J. Steinberg, Hotel Howard, 805 E. 5th St., Los Angeles, Cal.
1st Lieut. Dr. Henry A. Stephenson, 2299 Sacramento St., San Francisco.
Dr. S. Stillman, 2101 Webster St., San Francisco, Cal.
Dr. H. R. Stolz, Palo Alto, Cal.
Dr. W. J. Stone, Cheda Bldg., San Rafael, Cal.
Capt. Dr. Byron P. Stookey, Storey Bldg., Los Angeles, Cal.
Dr. L. Stoval, 1201½ Central Ave., Los Angeles, Cal.
1st Lieut. Dr. O. P. Stowe, Keystone Bldg., Mill Valley, Cal.
Lieut. Dr. W. I. Sunburnt, 714 M St., Sacramento, Cal.
Dr. E. L. H. Swift, Jonathan Club, Los Angeles, Cal.
Dr. R. B. Sweet, Marine Bk. Bldg., Long Beach, Cal.
Dr. Fred. Boyd Tapley, Marysville, Cal.
Dr. W. A. Tarleton, 224 S. Spring St., Los Angeles, Cal.
Dr. G. H. Taubles, 323 Geary St., San Francisco, Cal.
Dr. W. E. Tebbe, Weed, Cal.
Dr. R. L. Tebbitt, Haas Bldg., Los Angeles, Cal.
Dr. J. Temnle, Union Tr. Sav. Bk. Bldg., Santa Rosa, Cal.
Capt. Dr. W. I. Terry, 240 Stockton St., San Francisco, Cal.
Dr. B. Thomas, University Ave., Palo Alto, Cal.
Jr. Lieut. Dr. R. W. Thomas, U. S. N., Spreckels Bldg., San Diego, Cal.
Dr. H. A. Thompson, U. S. N., 5th and Beech Sts., San Diego, Cal.
Dr. H. S. Thomson, 2539 College Ave., Berkeley, Cal.
Dr. I. W. Thorne, U. S. N., 2101 Webster St., San Francisco, Cal.
Dr. J. Thornton, 1927 Elysian Park Drive, Los Angeles, Cal.
Lieut. Dr. T. E. Tillman, U. S. A., 126 Stockton St., San Francisco, Cal.
Dr. P. A. Tobin, Fresno, Cal.
Dr. Geo. P. Tolman, Grass Valley, Nevada Co., Cal.
Dr. E. N. Torello, 4263 Mission St., San Francisco, Cal.
Dr. F. P. Topping, 240 Stockton St., San Francisco, Cal.
Dr. C. L. Tranter, 126 Stockton St., San Francisco, Cal.
Dr. Edw. E. Tredway, 417 N. Lake Ave., Pasadena, Cal.
Dr. R. B. Tupper, 177 Post St., San Francisco, Cal.
Major Dr. E. C. Turner, 1021 10th St., Sacramento, Cal.
Dr. A. M. Tweedie, U. S. N., Newport Beach, Cal.
Dr. A. H. Vance, 1039 Water St., Sausalito, Cal.
Dr. B. H. Viau, U. S. N., Fresno Co. Hospital, Fresno, Cal.
Major Dr. H. L. Wagner, 518 Sutter St., San Francisco, Cal.
Dr. C. A. Walker, 504 Valencia St., San Francisco, Cal.
Dr. G. P. Waller, Jr., Black Shop Bldg., Los Angeles, Cal.
Dr. C. A. Warmer, 111 N. Euclid Ave., Ontario, Cal.
Dr. D. D. Weaver, Thomson Bldg., Oakland, Cal.
Dr. D. P. Webster, Westwood, Cal.
Major Dr. A. Weeks, 350 Post St., San Francisco, Cal.
Dr. P. Wegefarth, San Diego, Cal.
Dr. E. Le R. Wemple, 391 Sutter St., San Francisco, Cal.
Lieut. Dr. A. B. Wessels, Timken Bldg., San Diego, Cal.
Dr. C. W. West, Elko, Nevada.
Dr. S. V. West, Santa Ana, Cal.
Dr. C. G. Wharton, 607 S. Hill St., Los Angeles, Cal.
Dr. F. M. Whiting, 324½ Myers St., Oroville, Cal.
Capt. Dr. J. L. Whitney, U. S. A., University Cal. Hospital, San Francisco, Cal.
Dr. T. F. Wier, U. S. N., 415 Elm St., San Diego, Cal.
Dr. G. B. Wilcox, 20 Franklin St., San Francisco, Cal.
Dr. E. H. Wiley, Brockman Bldg., Los Angeles, Cal.
Capt. Dr. A. J. Wilkinson, Timken Bldg., San Diego, Cal.
Dr. H. J. Willey, Porterville, Cal.
Dr. F. T. Williams, 2124 California St., San Francisco, Cal.
Dr. H. De N. Williams, 3207 Mission St., San Francisco, Cal.
Dr. R. B. Williams, 135 Stockton St., San Francisco, Cal.
Dr. T. M. Williams, Bryant and Hamilton Sts., Palo Alto, Cal.
Dr. M. A. Williamson, Lone Pine, Cal.
Dr. N. E. Williamson, Stockton State Hospital, Stockton, Cal.
Capt. Dr. C. A. Wills, U. S. A., County Infirmary, San Leandro, Cal.
Dr. E. E. Wilson, Walnut Grove, Cal.
Dr. H. P. Wilson, Whittier Nat. Bk. Bldg., Whittier, Cal.
Dr. L. J. Wilson, Sebastopol, Cal.
Dr. P. W. Wilson, 218 E. Philadelphia St., Whittier, Cal.
Dr. F. E. Winter, Santa Ana, Cal.
Dr. W. H. Winterberg, 516 Sutter St., San Francisco, Cal.
Lieut. Dr. H. H. Wolfe, Albion, Cal.
Dr. J. M. Wolfsohn, 177 Post St., San Francisco, Cal.
Dr. A. G. Woodward, 3002A Stephenson Ave., Los Angeles, Cal.
Dr. F. A. Woodward, 2488½ W. Pico St., Los Angeles, Cal.
Dr. John Homer Woolsey, 5677 Ocean View Ave., Oakland, Cal.
Dr. H. F. Worley, Bacon Bldg., Oakland, Cal.
Dr. Harold W. Wright, 516 Sutter St., San Francisco, Cal.
Dr. H. W. Yemans, U. S. A., Western Dept., San Francisco, Cal.
Dr. J. A. Young, Oakdale, Cal.
Dr. L. H. Young, 108 Burrows St., San Francisco, Cal.
Dr. Oscar O. Young, Garden Grove, Cal.
Dr. Harold Zimmerman, Sacramento, Cal.
Dr. D. W. Zirker, Merced, Cal.
Lieut. Dr. Clarence L. Bittner, Sacramento, Cal.
Dr. A. Allen, U. S. A., 662 W. 60th St., Los Angeles, Cal.
Dr. Frank Ashmore, Polyclinic Hospital, 1535 Jackson St., San Francisco, Cal.
Dr. Z. A. Barker, U. S. N., 320 Market St., San Francisco, Cal.
Dr. D. S. Baughman, U. S. Marine Hospital, San Francisco, Cal.
Dr. Wm. Wallace Behlow, 233 Post St., San Francisco, Cal.
Dr. G. J. Bergener, 516 Sutter St., San Francisco, Cal.
Dr. J. B. Bostick, U. S. N., 1534 1st St., San Diego, Cal.
Dr. F. J. Bryant, U. S. N., P. O. Bldg., Soledad, Cal.
Dr. W. C. Chidester, San Mateo, Cal.
1st Lieut. Dr. C. T. Devine, 1st Sav. Bk. Bldg., Oakland, Cal.
Dr. C. C. Dickinson, U. S. A., McCloud, Cal.
Dr. Hiram Burton Duncan, 1638 Haight St., San Francisco, Cal.
Dr. Colonel Guy L. Edie, U. S. A., Presidio, San Francisco, Cal.
Major Dr. Frank S. Emmal, Physicians Bldg., San Francisco, Cal.
Dr. Edw. C. Ernst, Marine Hosp., San Francisco, Cal.
Dr. J. E. Fahy, 206 W. 10th St., Los Angeles, Cal.
Dr. D. C. Farnsworth, U. S. A., 2626 W. 9th St., Los Angeles, Cal.
Dr. Justin Keyser Fuller, U. S. N., 779 1st Ave., San Francisco, Cal.
Dr. T. C. Galloway, U. S. Marine Hospital, San Francisco, Cal.
Dr. Edw. R. Guinan, U. S. N., Ryland Bldg., San Jose, Cal.
Dr. Charles J. Harbeck, Fort Rosecrans, San Diego Co., Cal.
Dr. Frank Hinman, 516 Sutter St., San Francisco, Cal.
Dr. J. L. Howard, 135 Stockton St., San Francisco, Cal.
Dr. F. M. Hull, 416 E. 20th St., Los Angeles, Cal.
Dr. R. H. Hunt, U. S. N., P. O. Box 68, La Jolla, Cal.
Capt. Dr. C. W. Lippman, U. S. A., 135 Stockton St., San Francisco, Cal.
Dr. Parker, U. S. Marine Hosp., San Francisco, Cal.
Dr. I. W. Robbins, U. S. N., Training Station, Yerba Buena Island, Cal.
Dr. T. B. Roche, U. S. N., 126 Stockton St., San Francisco, Cal.
Dr. F. H. Rodenbaugh, U. S. N., 915 Ashbury St., San Francisco, Cal.
Dr. A. E. Rude, U. S. P. H. S., 240 Stockton St., San Francisco, Cal.
Dr. A. F. Sampson, 133 Geary St., San Francisco, Cal.
Dr. Henry H. Searls, U. S. N., Univ. Cal. Hosp., San Francisco, Cal.
Dr. Jas. M. Smithwick, Byron, Cal.
Dr. N. C. Trew, R. F. D. No. 5, Box 789, Los Angeles, Cal.
Dr. J. F. Worhey, U. S. P. H. S., U. S. Marine Hosp., San Francisco.
Dr. M. G. Worley, U. S. P. H. S., 912 Grant Ave., San Francisco, Cal.
Dr. J. G. Ziegler, U. S. N., Mare Island, San Francisco, Cal.

NOT IN ACTIVE SERVICE.

Dr. Herbert Williams Allen, 240 Stockton St., San Francisco, Cal.
Dr. J. Henry Barbat, 275 Post St., San Francisco, Cal.
Dr. James A. Black, 209 Post St., San Francisco, Cal.
Dr. Herbert I. Bloch, Physicians Bldg., San Francisco, Cal.
Dr. Philip King Brown, 516 Sutter St., San Francisco, Cal.
Dr. Frank B. Carpenter, 209 Post St., San Francisco, Cal.
Dr. Albert Cohen, 146 Grant Ave., San Francisco, Cal.
Dr. Arthur L. Davis, 86 Post St., San Francisco, Cal.
Dr. Leo Eloesser, 135 Stockton St., San Francisco, Cal.
Dr. George H. Evans, 233 Post St., San Francisco, Cal.
Dr. E. H. Falconer, 516 Sutter St., San Francisco, Cal.
Dr. Cuthbert Fleissner, Galen Bldg., San Francisco, Cal.
Dr. M. R. Gibbons, 350 Post St., San Francisco, Cal.
Dr. Chas. F. Griffin, 2804 Folsom St., San Francisco, Cal.
Dr. H. Gunn 240 Stockton St., San Francisco, Cal.
Dr. H. Horn, 209 Post St., San Francisco, Cal.
Dr. G. R. Hubbell, 516 Sutter St., San Francisco, Cal.
Dr. S. J. Hunkin, 1155 Bush St., San Francisco, Cal.
Dr. T. W. Huntington, 516 Sutter St., San Francisco, Cal.
Dr. C. G. Levison, Physicians Bldg., San Francisco, Cal.
Dr. A. C. McKenney, 126 Stockton St., San Francisco, Cal.
Dr. W. F. McNutt, Jr., 135 Stockton St., San Francisco, Cal.
Dr. Sol. C. Mish, 111 Ellis St., San Francisco, Cal.
Dr. H. S. Moore, 209 Post St., San Francisco, Cal.
Dr. Wm. L. Moore, 2421 Sutter St., San Francisco, Cal.
Dr. H. D. Power, 240 Stockton St., San Francisco, Cal.
Dr. Alfred C. Reed, 350 Post St., San Francisco, Cal.
Dr. E. Rixford, 1795 California St., San Francisco, Cal.
Dr. R. B. Williams, 135 Stockton St., San Francisco, Cal.

State Board of Health

DECEMBER MEETING.

The State Board of Health met in Sacramento on December 1, 1917. The members present were: Dr. George E. Ebright, president, and Drs. Fred F. Gundrum, Edward F. Glaser, Adelaide Brown, Robert A. Peers and Wilbur A. Sawyer.

The Board approved the action of the Secretary in making a temporary appointment of Dr. Chesley Bush of Colfax as Tuberculosis Expert for the purpose of examining and advising men who had been rejected at the time of the selective draft and who resided in parts of the State where local tuberculosis experts were not available.

The Board appointed Mr. Arthur M. Bean as Assistant Biologist in the Division of Biology of the Bureau of Communicable Diseases on a full time basis in order that the hookworm control work might be expedited.

On account of the rapid increase in the work of the Southern Branch Laboratory of the Bureau of Communicable Diseases in Los Angeles, the Board appointed Miss Lucy Powers as laboratory helper to assist the bacteriologist in charge.

The Board appointed Dr. W. A. Sawyer as a delegate to represent it at the Conference of Northwestern States on the Control of Venereal Diseases to be held in Tacoma, Washington, on December 10th and 11th.

The Committee on the appointment of a Sanitarian in the Bureau of Venereal Diseases reported that Dr. Walter M. Dickie of Los Angeles had been appointed on November 14, 1917. This completed the staff of the Bureau as originally planned.

Rules for the prevention of chickenpox, measles, German measles, mumps, whooping-cough, epidemic cerebrospinal meningitis and acute lobar pneumonia, were adopted. Also a set of rules for the prevention of smallpox was adopted. These sets of rules are printed in full in the Monthly Bulletin of the State Board of Health for January.

The Board, by resolution, in accordance with the provision of Chapter 744, Statutes of 1917, prescribed the following as an acceptable method of sterilizing drinking receptacles, which method may be used in place of sterilizing in boiling water or steam: The drinking receptacles shall be placed in a wire basket and immersed completely for a period of five minutes in a solution of not less than one pound of lye or caustic soda to each 2½ gallons of water, the lye being of standard commercial quality and containing not less than 96 per cent. of sodium hydrate. When practicable, the lye solution should be used hot. All traces of the lye should be removed by thorough rinsing before the glasses are handled.

The Board adopted the following additional rule for the enforcement of the new milk law, Chapter 576, Statutes of 1917:

"Rule 5. Counts of Bacteria. The method of ascertaining the number of bacteria in milk or cream shall be in accordance with the standard methods of the American Public Health Association for milk analysis."

The Training School for Nurses in connection with St. Catherine's Hospital at Santa Monica was placed on the list of accredited nurses' training schools for one year.

Certificates as registered nurses were granted to three candidates through reciprocity and to 184 nurses who had passed the examinations held by the Bureau of Nurses' Registration on October 18th and 19th in Sacramento, San Francisco and Los Angeles.

Licenses to operate cold storage warehouses were granted to three firms on the recommendation of the Bureau of Foods and Drugs. Citations had been sent out in 176 cases of alleged violations of the pure food and drugs acts. Hearings were held and many cases were referred to District Attorneys for prosecution.

W. A. SAWYER, Secretary.

A PRESSING QUESTION: SHALL WE USE OUR GRAIN FOR BREAD OR FOR BEER?

Last year approximately 3,000,000 tons of grain were used in breweries and distilleries. Most of this was millable grain. Careful calculations show that each million tons of grain is sufficient to supply a one-pound loaf of bread daily to six million people. Moreover, the fact must not be overlooked that the conversion of grain into alcohol, rather than into bread, represents a distinct loss of 50,000 tons of protein, for each million tons of grain.

No amount of sophistry regarding the food value of alcohol can overcome the fact of this absolute waste of an essential constituent of our food. Nor can it be contended that the protein of the grain is conserved by being converted into beef through the feeding of brewers' grain to cattle. The proportion thus salvaged has been allowed for in our calculations. The fact remains that the amount of protein irretrievably wasted in this country annually through the conversion of the grain into alcohol represents the protein needs of six million people for one year.

How much longer can we afford to waste valuable food materials on such an appalling scale!

POPULAR MEDICAL LECTURES.

Stanford University Medical School.

January 4, 1918: "The Control of Vice Diseases Among Troops Through Civil and Military Cooperation." Colonel L. U. Maus, U. S. Army.

January 18, 1918: "Surgery of the Present War." Dr. Leo Eloesser.

February 1, 1918: "Industrial Fatigue." Professor E. G. Martin.

February 15, 1918: "Food Poisoning from Canned Goods." Dr. E. C. Dickson.

March 1, 1918: "Recent Experiences of a Medical Man in the War Zone." Dr. William P. Lucas, Professor of Pediatrics, University of California.

March 15, 1918: "Circulation of the Blood." Illustrated with moving pictures. Dr. A. A. D'Ancona.

Notices

THE J. HENRY BARBAT PRIZE.

Dr. J. Henry Barbat, President of the Society, offers a cash prize of $50.00 for the best paper presented at the meeting at Del Monte in 1918. Papers on original subjects are to have preference. A jury of five members, appointed by the Council, will have final jurisdiction in the distribution of the prize.

INSURANCE STATISTICS.

The Statistical Bureau of Metropolitan Life Insurance Company, 1 Madison Avenue, New York City, invites physicians, public health and social workers to make use of its valuable collection of mortality statistics. These statistics present the principal causes of death among white and colored wage-earners in the United States and Canada. The material covers over ten million individuals for each of the six years, 1911 to 1916. Death rates are available for each race, by sex and by age period.

State Board of Medical Examiners.

ANNUAL TAX.

Section 2, chapter 81, statutes of 1917, providing for the levy of an annual registration fee of $2.00 is now operative and every holder of any form of certificate issued under any of the acts for the regulation of the practice of medicine or any form of the healing art in California, is called upon to remit $2.00 to the Board of Medical Examiners, Sacramento, California, prior to January 1, 1918, and annually thereafter. This section further provides for the automatic revocation of the certificate of one who fails to remit the $2.00 fee within sixty days after January 1 of each year, however the certificate so cancelled can be restored by the payment of a fee of $10.00 at a subsequent date and without requirement of an examination.

The office of the Board of Medical Examiners, although not required by statute so to do, has but recently mailed approximately 6,000 notices to licentiates calling attention to the amendment as above noted, and in a form letter urged the cooperation of the profession in an endeavor to perfect the office records in the instance of those licentiates whose records were destroyed by the fire which devastated San Francisco, in April, 1906, during which conflagration the records of the Board of Medical Examiners suffered "in extremis" while the records of the registration of all licentiates in the office of the county clerk of the City and County of San Francisco were destroyed.

The Board fortunately had access to a source of authentic information which made possible the restoration of a greater part of the records, however, there were many instances where exact dates were unobtainable or where typographical errors may have crept into the record.

Having in mind the necessity of authenticated data filed in the office, and realizing the ready response as well as cheerful assistance the profession always offers in matters of such vital importance, the office of the Board inclosed affidavit form 116 with the notice above mentioned.

True, the medical act provides no penalty for failure of the individual to make such affidavit, however, we know the profession would realize that no change of the office record could possibly be made unless substantiated by an affidavit. Our surmise is substantiated by results so far obtained, for out of approximately 1,000 responses to date, there has been but one written complaint filed in the office of the Board.

There will be no future necessity of forwarding affidavits with the next annual notice, in as much as we feel assured that the ready response to our first appeal will afford sufficient information.

The number of licentiates who have moved to other states without keeping the Board informed as to their address, is much larger than expected and the office force is actively engaged in endeavoring to locate all who are listed as "address unknown" that they may be informed of the amendments to the California Medical Practice act and by compliance therewith keep their certificate in good standing. Many instances have arisen where individuals licensed under a specific name, have had their name changed through marriage or other process at law, without due notice thereof being filed with the office of the Board, and as a consequence reference to the directory, or inquiry at the office of the Board, fails to elicit information that the individual in question is entitled to practice in as much as no record of the name, as changed, appears in our office. This matter is of urgent importance to the specific licentiate who should return to the Board the certificate originally issued for proper endorsement and at the same time file the regular affidavit form, the change of name.

An unexpected problem has been thrust upon the legal department of the Board through the call to the colors of approximately 750 licentiates of California, some of whom even now may be "over seas," so located that mail cannot reach them for an extended period, with an added complication arising from conditions rendering impossible the forwarding of the $2.00 fee to the office of the Board. No provision for exemption of the payment of the annual registration fee was provided when the law passed the legislature and a call of California medical licentiates to foreign shores through the exigencies of war was not anticipated. While it is true that the majority of the medical reserve corps enlisted from California are not as yet on foreign soil, yet they are scattered to the four winds and as a consequence difficult to reach by mail. This problem is in the hands of the legal department of the Board for solution.

The Board will mail a printed **form receipt** for the $2.00 fee as fast as recorded, the printed form having been adopted as a rapid method of forwarding to the payee, an acknowledgment of the fee and further affording a carbon copy thereof for permanent filing in the office of the Board.

A new directory will be compiled on or about January 1, 1918, a copy of which will be forwarded to every licentiate paying the annual tax, and in as much as the directory heretofore published by the state medical society has been discontinued, we will endeavor to furnish in addition to the regular alphabetical arrangement of names, as much supplemental data as may be deemed of particular interest to the profession, or others who may feel the need of such a book for reference.

Supplements will be issued from time to time, noting therein the individuals licensed since the prior edition and, by filing the supplements with the original, all data in reference to licentiates will be immediately available.

FIRST SEMI-ANNUAL REPORT OF WAR COUNCIL OF THE AMERICAN RED CROSS.

The Red Cross War Council reports on the work of the Red Cross during the almost six months which have elapsed since its appointment by the President. Included are details as to collections on account of the War Fund and appropriations made from the Fund, up to November 1.

The growth of Red Cross activities among the suffering civilian populations in the different allied countries is, up to this time, the outstanding feature of Red Cross work in this war. The magnitude of the work in France is particularly impressive.

Up to date approximately $88,000,000 in cash has been collected for the War Fund. The demands, however, in Europe, are increasing with great rapidity and on the present basis of expenditure the $100,000,000 War Fund cannot last much beyond spring.

During this period the War Council appropriated from the War Fund (including $7,659,000 advanced to chapters for purchase of material and to be returned to the War Fund), $10,969,216.60 for work in the United States, as contrasted with the appropriation of $27,885,816.86 for work abroad, of which $20,601,240.47 was for use in France. There have been appropriated from funds restricted to specific purposes $1,417,625.74. As $7,659,000 advanced by the War Council is to be returned to

the War Fund the net appropriations amount to $32,613,659.20.

The total expenses of raising and collecting the War Fund are proving to be less than one per cent. The War Fund is deposited locally by the chapters and campaign committees. About 3,500 banks now hold these deposits, in the name of William G. McAdoo, Treasurer.

Forty-nine Army base hospital units and five for the Navy have been recruited, organized and equipped by the Red Cross. More than twelve of the Army units and two of the Navy units have now been mustered into their respective Medical Corps and are seeing service. The Red Cross has also organized 45 ambulance companies, with a total personnel of 5,580, all of which have been taken into the Army Medical Corps, some for service abroad, others for the camps and cantonments. A General Hospital, for the use of the Navy, has been established at Philadelphia. Convalescent homes have been built at Fort Oglethorpe and Fort McPherson, Georgia, and mobile laboratory cars are to be provided for use in case of emergencies at the camps.

Through its Sanitary Service, the Red Cross is co-operating with local health authorities in maintaining the best possible sanitary conditions in the zone just outside military jurisdiction at the trainings camps and cantonments. Twenty sanitary units have been organized for this purpose. It has continued its work of disaster relief during the war, and has rendered aid in 64 calamities. Recently a call for help for flood victims in Tientsin was answered by the dispatch of a relief expert to the city and the sending of $125,000.

Fourteen thousand Red Cross nurses have been enrolled for duty, and approximately 3,000 have already been called into active nursing service, of whom 2,000 are working abroad. A program for increasing the reserve of fully trained nurses for war service has been adopted, in concert with the Committee on Nursing of the Council of National Defense and other nursing authorities.

Millions of women have been mobilized for work on surgical dressings, hospital garments, refugee clothing, knitting garments, and comfort kits. It is estimated that the value of their work during the next twelve months will amount to nearly $40,000,000.

Since April 1, 1917, the Red Cross has sent abroad 13,336 cases of surgical dressings, hospital supplies and clothing, containing approximately 13,000,000 separate articles. It has promised to send 3,000,000 surgical dressings to France every month for the next six months.

Courses of instruction in elementary hygiene and home care of the sick, home dieteties, and first aid have been given throughout the United States. More than 34,000 women have completed the first of these courses, and 75,000 certificates of proficiency in first aid have been issued during the past year alone.

At National Headquarters in Washington a staff has been built up which included, on November 1, 1917, sixty-three officials, most of them business men and women of great experience in large affairs, who are working without payment of either salary or living expenses. Numerous others are either giving their time or are working for nominal pay. The membership has grown, since the war, from about 200,000 to more than 5,000,000. The salary list has been reduced since last July from about 700 to 425. Salaries have decreased also in average amount. Had the Red Cross been obliged to pay salaries to all the heads of departments at National Headquarters the present organization would have been impossible.

A new class of members, the Junior Red Cross, has been created for school children, who are admitted by school units, to a share in Red Cross membership and relief work upon payment of a membership fee of twenty-five cents per pupil.

The work of the Red Cross in Europe centers necessarily in France and Major Grayson M. P. Murphy, a member of the War Council, is head of the Commission to France and Commissioner for Europe. Headquarters are in Paris, in a building furnished free for the current year for the use of the Red Cross. The working staff in France numbers 864 persons, of whom only 347 are paid by the Red Cross. The others are volunteers, or are paid by their former employers or from funds privately subscribed, so that the average cost to the Red Cross is only about $300 per year for each worker.

The principal purposes of the work of the American Red Cross abroad may be summarized thus:

1. To do everything possible to assist our army and navy in insuring the health and comfort of American soldiers and sailors abroad, and

2. To relieve suffering among the armies and destitution among the civilian populations among our allies.

The establishment and maintenance in France of canteens, rest houses, recreation huts, and other means of supplying comforts in the armies of our allies have been the means of heartening them and keeping their men in the field until our men could become fully effective.

Work for the American Army is the first and most important part of the Red Cross program in France. More than twelve base hospitals organized by the Red Cross, and now mustered into the Army Medical Corps are in service in France. The Red Cross is also administering, under Army control, the hospital at Nuilly formerly known as the American Ambulance, together with Dr. Joseph A. Blake's hospital in Paris.

The Red Cross is serving 3423 military hospitals, both French and American, through the Hospital Supply Service, which operates sixteen warehouses and a motor transport system. Approximately 15,000 tons of material—hospital and general relief supplies—are distributed monthly from these warehouses. The Surgical Dressings Service reaches 2000 hospitals. American workshops in France will manufacture nitrous oxide, repair hospital apparatus, make splints and hospital appliances.

An appropriation of $100,000 has been made to enable the American doctors now in France to procure suitable buildings. Special laboratory equipment and animals for experimental purposes, for special military medical research work looking toward the recognition and study of diseases among soldiers, the eradication of lice, fleas and scabies, the treatment of trench nephritis, trench heart, war neurasthenia, exhaustion, lethal gases, shell concussion, wound infection, compound fractures, etc.

Relief of refugees throughout the devastated zone has been undertaken by the Red Cross. Relief warehouses have been placed at strategic points behind the lines, from which food, clothing, household goods, agricultural implements and tools are being distributed to the returning refugees. Foodstuffs to the value of $2,870,300 have already been bought in France or shipped there for military and civilian relief.

In good agricultural districts the Red Cross is co-operating with the French government and with American and English friends in assisting the population of ruined villages to begin repair of houses, etc.

At Evian, where French refugees, mostly women and children, who have been held prisoners behind the German lines are returned to France, the Red Cross has provided motor ambulances for the transportation of the sick and feeble and has opened children's hospitals. Hundreds arrive there almost daily, destitute and sick.

Special work has been begun for mothers, infants, and children. The Red Cross has sent three detachments of children's specialists to care for babies and expectant mothers, in the hope of checking the increase in infant mortality.

At two centers the Red Cross is caring for orphans and children from bombarded villages. A large refuge has been opened at one, at which sick and neglected children are being given expert medical care. From the other a traveling dispensary and shower bath is being sent out daily to make the rounds of the nearby villages.

In addition to the commission to France, commissions were sent to investigate conditions and extend immediate relief in Russia, Rumania, Serbia and Italy. The Russian Commission has completed its survey, and some of its members have returned to the United States, leaving an operating organization in Petrograd.

The Italian Commission has also returned to the United States, and an operating commission is to be sent to Italy as quickly as possible.

The commission to Italy used an appropriation of $200,000 for immediate relief in that country. The Red Cross acted promptly when the Italians were forced to retreat, pledging its aid through Ambassador Page and placing a special relief fund of $250,000 at its disposal. This was later raised to $750,000.

Commissions are at work in Rumania and Serbia. A commission and deputy commission have been assigned to England, and a special department has been set up for Belgium.

In Belgium the work of the Red Cross, which is confined to the part of the country still held by the Allies, is chiefly in co-operation with the relief interests of the King and Queen. The Red Cross is assisting Belgian hospitals and children refugees, aiding Belgian villagers to re-establish themselves in the devastated zone left by the retreating Germans, and helping to care for Belgian children, both in Belgium and in France and Switzerland.

The work of the Red Cross in Russia centers on the medical and surgical needs of the army. Several shipments of drugs and hospital supplies have been made, and a unit of 125 motor ambulances has been sent to Russia. The Red Cross has shipped two million pounds of condensed milk for the use of mothers and children in the large cities.

New Members

Baker, Walter E., Los Angeles.
Abramson, Max J., Los Angeles.
Feldman, Abraham, Los Angeles.
Purcell, Ruth, Los Angeles.
Shippey, Roderick H., Long Beach.
Wells, Maria C., Los Angeles.
Keller, Webster F., Van Nuys.
Bennett, Laura, Los Angeles.
Carter, Martin G., Los Angeles.
Gerson, T. Percival, Los Angeles.
Peppers, Chas. H., Los Angeles.
Tredway, Edward E., Pasadena.
Derrick, Dr. Jos. S., Los Angeles.
Stadelman, Eugene, Long Beach.
Schroeter, Oscar V., Los Angeles.
Bancroft, Irving E., Los Angeles.
Mace, Lloyd R., Hollywood.
Roome, A. E., Bisbee, Arizona.
McCreery, R. L., Happy Camp.
Miller, Chas. F., Los Angeles.
Metcalf, Clair F., South Pasadena.
Kellogg, P. S., Norwalk, Cal.
Ide, Clarence E., Los Angeles.
Cosgrave, Millicent, San Francisco.
Bruseo, Henry D., San Francisco.
Anderson, Kathleen, San Diego.
Schaupp, Karl L., San Jose.
Wickett, Wm. H., Fullerton.
Moss, Joseph M., Camp Kearny.
Benton, J. J., Berkeley.
Kibbe, Minora E., Oakland.
Hoyt, Henry F., Long Beach.
Hanson, Wayne P., Los Angeles.
Conroy, C. P., Los Angeles.
Peterson, Anderson, Rochester, Minn.
Hibben, J. Severy, Pasadena.
Carson, Emma M., Los Angeles.
Sweet, Earl, Los Angeles.
Rogers, Albert C., Los Angeles.
Hughes, H. West, Los Angeles.
Dieterle, Karl L., Los Angeles.
Brandel, Harry M., Los Angeles.
Platt, Irving S., Los Angeles.
Haygood, A. G., Downey, Cal.
Converse, Geo. M., San Francisco.
Sproat, Samuel M., Portola.

Deaths

Small, Alvan E., of Oakland, died at his home on Dec. 14, following a heart attaek.

Lee, Benjamin Brooks, died at the Buena Vista Sanatorium, San Francisco, Nov. 23, 1917, of pneumonia, aged 61 years.

Braunstein, Joseph, died at the Hotel Granada, San Francisco, on Dec. 16, 1917. He was a graduate of the University of Austria, '78.

Cheeney, Walter Sylvester, 788 14th St., Oakland; Med. Coll., S. F., California; died recently at his home in Oakland.

Whitten, Wm. Daniel, of San Diego, Cal.; Univ. Mich., Ann Arbor, '02; died at the Pottenger Sanitarium, Monrovia, Calif., on Dec. 5, 1917.

Torello, E. N., died Oct. 28, 1917; aged 61; S. F.

Kent, R. W., of San Francisco; Med. Dept. Univ. City of New York, '86, (C) '89; died in Calcutta, India, Sept. 30, 1917.

Dr. John Taylor Jones.

Died—At Grass Valley, Monday, November 19, 1917, John Taylor Jones, M. D., aged 42 years.

John Taylor Jones was a native of Grass Valley, being the son of the late Dr. W. C. Jones of that city. Graduating from Cooper Medical College in 1898, he spent a year's internship in Lane Hospital before entering practice in his native city. From that time until the commencement in 1908 of his final illness, Dr. Jones' professional career was one of increasing success. As a result of his exceptionally brilliant mental gifts, combined with an apparently tireless energy, he became known, not only to the laity but also to the members of the profession, as one of the foremost surgeons in Northern California. The members of his local medical society elected him twice as President, and he was also honored by the Northern California District Medical Society by being elected to the Presidency of that body in 1905. An injury in 1908, which was the commencement of the illness which eventually caused his death, cut short his career. For nearly ten years he was doomed to a life of semi-invalidism, a sentence which he bore with patience and uncomplaining fortitude.

It was the privilege of the writer of these lines to know John Jones very intimately during nearly all of his medical life and to be associated with him frequently in consultation. These associations led to a firm lasting friendship, founded on the part of the author upon respect for his clean-minded, generous, sportsmanlike character and admiration for his brilliant mental attainments, his rare diagnostic acumen and remarkable surgical ability. He possessed the patienee, the sympathy, the broadmindedness and the faithfulness to duty which, eombined with professional skill, go to make up the exceptionally successful and beloved physician. Through all the years of acquaintaneeship, in fair weather or foul, in prosperity or adversity, in health or in sickness, he was the same kind, generous, wholesouled, charming gentleman, and when the soul of John Jones left his tired wan frame on that morning of November 19, just as the morning sun was tinting the foothills of the Sierras he loved and where he had so faithfully labored, there passed from this life one of the most lovable men it has been the privilege of the author of this very inadequate tribute to meet.

R. A. P.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

Publication Committee:
E. C. FLEISCHNER, M. D. A. B. GROSSE, M. D. SOL HYMAN, M. D. GEORGE H. EVANS, M. D.

Advertising Committee:
R. E. BERING, M. D. THOS. E. SHUMATE, M. D.
Representative of the Council, E. N. EWER, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland	San Bernardino.....Dr. C. L. Curtiss, San Bernardino
Butte.....Dr. Edward Baumeister, Chico	San Diego.....Dr. Robt. Pollock, San Diego
Contra Costa.....Dr. U. S. Abbott, Contra Costa	San Francisco.....Dr. René Bine, San Francisco
Fresno.....C. O. Mitchell	San Joaquin.....Dr. Dewey R. Powell, Stockton
Glenn	San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
Humboldt	San Mateo.....
Imperial	Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Kern.....Dr. C. A. Morris, Bakersfield	Santa Clara.....Dr. Chas. Richards, San Jose
Lassen-Plumas	Santa Cruz.....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles	Shasta.....Dr. F. Stabel, Redding
Marin	Siskiyou.....Dr. Wm. F. Shaw, Yreka
Mendocino.....Dr. O. H. Beckman, Fort Bragg	Solano.....Dr. P. H. Reilly, Vallejo
Merced	Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Monterey.....Dr. T. C. Edwards, Salinas	Stanislaus.....Dr. E. F. Reamer, Modesto
Napa	Tehama .....
Orange.....Dr. H. A. Johnston, Anaheim	Tulare.....Dr. J. T. Melvin, Porterville
Placer	Tuolumne .....
Riverside.....Dr. Paul E. Simonds, Riverside	Ventura.....Dr. C. A. Jenson, Ventura
Sacramento.....Dr. Wm. A. Beattie, Sacramento	Yolo .....
San Benito.....	Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI FEBRUARY, 1918 Number 2

ANNUAL MEETING AT DEL MONTE.

The annual meeting of the California State Medical Society will be held at the Del Monte Hotel, April 16, 17 and 18. A program of timely and unusual interest is being prepared. The place and season of the meeting insure a splendid outing for every doctor in attendance. Special announcements and a tentative program will be published next month. It should be the pleasure of every doctor in the state to attend this meeting if he can possibly do so. He is the one who will profit most by attendance. Give the matter serious thought and make your reservations early.

RAILROAD RATES:

A railroad rate of one and one-half lowest one way first-class fare per capita for the round trip on the receipt-certificate plan from all points in California, provided fifty (50) or more are in attendance, will prevail. When you buy your ticket to go to Del Monte, pay the full fare and get a receipt-certificate. When you get to Del Monte, present this to the State Secretary to be signed and then when you get your return ticket, hand this receipt to the agent and he will give you a return ticket for one-half fare.

Do not fail to get the receipt-certificate, or to have it signed by the State Secretary, for if you do, you have no redress.

Every delegate should make it his first business to attend this session as matters of the utmost importance will come up for consideration. Questions have arisen in which every member of the Society is vitally interested and the delegates who represent large numbers of our members who cannot attend, should be sure to be present, even if at a personal sacrifice.

Secretaries of county units should make it their special duty to attend this meeting so that they may be in a position to explain to their members just what was done and why.

County secretaries can talk more effectively to their members on Society matters by having attended this meeting.

Hotel Rates: Hotel Rates are on the American plan.

Single room without bath, $5.50 per day, one person.

Double room without bath, $10.00 per day, two persons.

Single room with bath, $6.50 per day, one person.

Double room with bath, $12.00 per day, two persons.

SCIENTIFIC PROGRAM.

A large number of good papers have been secured for the coming meeting at Del Monte and a tentative program will be published in next month's Journal. Naturally in these times various problems connected with the war work are of paramount interest and accordingly arrangements have been made to have the same presented. There will be sufficient variety to the subjects, however, to insure the presentation of a program of unusual value and interest.

THE CONTROL OF CANCER.

Physicians should be more familiar with the excellent activities of the American Society for the Control of Cancer. The basic facts of the situation are of course, common knowledge among physicians. Cancer always starts as a purely local growth in which stage it is possible to remove and cure it. It is not a "blood disease." It is not contagious and probably not hereditary. It often causes no pain or localizing symptoms until well established. Complete and attentive examination is the obligation of the physician to every patient, more especially to that patient who may conceivably be the victim of cancer. Early consultation with a physician is the obligation of every individual who has any departure from normal physical and mental health, more especially in the years where cancer is more frequent. Statistics seem to indicate definitely that cancer is increasing, above the amount to be explained by increased accuracy of diagnosis and report.

Various agencies are available for the physician in his campaign against the spread of cancer. The chief is perhaps the education of the public in the importance of early careful diagnosis, and especially in the serious danger of cancer quacks, such as Chamlee, for instance, who was discussed a few months ago, and of advertised cures and treatments. With the diagnosis certain, no cure is safe which does not comprehend the immediate and complete ablation of the cancerous tissue. Such public education is being directed by the American Society for the Control of Cancer, and should be encouraged by the medical profession, individually and through its various organizations. It includes personal instruction by the physician, newspaper and magazine publicity, and public lectures by qualified speakers. These latter can secure the syllabus of a lecture entitled, "The Control of Cancer," from the American Society, and also the use of lantern slides.

Another important agency is exercised by the nurses of the country, especially those engaged in public health work. Their advice is not infrequently of great weight with the public. Instruction in the early recognition of cancer should be given in all schools of nursing, so that the danger signs may be recognized by the nurse and the victim promptly referred to competent medical attention. The various women's clubs and organizations may become a valuable agency in this propaganda if they will do so. Local physicians could well bring this matter to the attention of the proper persons to secure such publicity.

The practicing physician does not need to be conversant with all the details of cancer research, constructive and interesting as these are. He does need to recognize the importance of early diagnosis and adequate treatment, if the death rate from cancer is to be reduced. He will find some or all of the agencies mentioned, available for his use in this connection.

INSURANCE AND THE INDEMNITY DEFENSE FUND.

We have been greatly surprised to learn that some of our members are under the present impression that the Council and Legal Department of the society have recommended to the members that their insurance be dropped upon joining the Indemnity Defense Fund.

This is erroneous. Neither the Council nor the Legal Department has at any time advocated such a course. On the contrary our Legal Department has at all times cautioned members who were carrying insurance to continue the insurance and has recommended that they join the Fund as well, but as to all members who had no insurance, the recommendation has been that they join the Fund.

The officers and representatives of the society have not been able to bring the advantages and benefits of membership in the Fund sufficiently to the attention of all of our members as yet, and the membership therein is not nearly as large as it will be when these facts are clearly before the personnel of our organization. For this reason, and because our advisors desire to secure more complete records of our experience, and by reason furthermore of the increasing tendency to assert malpractice claims, our officers and legal department have held to the course outlined above.

Therefore, as we have heretofore said, and we thought with sufficient plainness, and which we here repeat, the society does not advise any member to cancel or give up his insurance upon becoming a member of the Fund, but on the contrary, to continue his insurance and to join the Fund as well.

In addition to the many advantages of membership in the Fund which we have heretofore pointed out in these columns, we direct special attention to the resolution adopted at the meeting of the Council held at Los Angeles November 24, 1917, regarding Medical Defense Rule No. VI, which rule heretofore provided that if a member had insurance covering malpractice claims or suits, he must elect whether the society or the insurance company shall undertake his legal defense. The modification made by resolution at the recent Council meeting, abrogates the rule in cases of Contributing Members. Therefore a member who has insurance and who has joined the Fund does not, in cases covered by both his insurance and his membership in the Fund, have to elect regarding the conduct of his defense. His defense will be undertaken and conducted jointly by the insurance company and the society. The benefit of this course to such members is, we believe, so obvious that we will not comment further about it.

OBSESSIONS OF THE NORMAL MIND.

It is a truism that the frontier of normal psychology merges easily with the abnormal. Many mental traits which do not appear prominently in a well-balanced mind become pathological by exaggeration alone. If we are to accept Freud's explanation, it would appear that lines of mental activity which are uncomfortable, or unpleasant,

either intrinsically or because of their associations, are concealed and repressed in the sub-liminal consciousness and by their occasional irregular defensive or expressive outbreaks, cause these borderline symptoms, which to a small degree characterize a large proportion of normal persons and to a larger degree characterize a large proportion of abnormal persons.

In such a semi-pathological classification may be placed certain minor forms of loss of memory, such as the sudden inability to recall the name of a person or article, certain tricks of the tongue which pervert what was intended to be said, certain kinds of errors both of judgment and of deed, and finally certain fixed ideas which, in a surprisingly large number of normal persons, come into the mind unsolicited and cannot be banished voluntarily.

Such obsessions of the normal mind are the subject of a suggestive note by C. S. Berry in the Journal of Abnormal Psychology.[1] The data compiled are drawn from a study of the written answers to appropriate questions asked of about 200 mature students of educational psychology. A typically grotesque and interesting list of fixed ideas was obtained, often associated characteristically with fatigue, either mental or physical, and apparently partaking in some cases of the elements of illusion, hallucinosis and dreams. About 25% of the 200 had at some time had fixed ideas.

Some noted ideas closely bordering on imperative ideas, such as an impulse to jump over a precipice or before a moving train. Berry makes two comments. (1) In many cases, with no outside aid, the obsession runs a self-limited course, and tends to disappear or at least to lose its emotional force. (2) In a large percentage the obsession dates back to childhood. Berry rightly urges the value of a careful scientific study of normal obsessions, not alone for the direct data to be obtained, but also for the light it would throw on their relation to pathological obsessions.

THE VASO-MOTOR SYMPTOMS OF THE MENOPAUSE.

In spite of the great advances of modern physiology and, especially, of the assistance given our understanding of the physiological disturbances connected with cessation of ovarian and testicular secretion by recent laboratory studies, there is much as yet unexplained in the symptomatology of the menopause. This is a matter of importance to every medical practitioner as the disorders and discomforts of this period have a striking nervous as well as physical effect. Particularly are the vaso-motor symptoms hard to control and vexatious to the patient.

Culbertson has recently made a study of this subject,[2] and his findings throw light on the causation especially of the vaso-motor disturbances and on a rationale of effective treatment. He explains the somatic and psychical disorders as the result of perverted function of the endocrine glands due to lack of ovarian secretion. The psychic features are especially due to the disturbed thyroid function, usually bordering on hyper-thyroidism but less commonly being the reverse.

This writer considers the vaso-motor symptoms to be due to an instability of the blood pressure, which usually appears as a "vacillating hyper-tension, both systolic and diastolic." He finds that the diastolic pressure is less increased than the systolic and thus results in a larger pulse pressure which is the immediate cause of the symptoms, associated with the vacillating arterial pressure. In the fewer cases where there is a hypo-tension, there is still an increased pulse pressure and a similar vacillation of pressure. The hyper-tension seems referable to excessive suprarenal or hypophyseal secretion. The blood pressure can be gradually brought to normal by the exhibition of the hormone contained in corpus luteum extract from animals in early gestation, and with this the vaso-motor symptoms disappear. Culbertson supports the view that the pressure changes are functional only, by the fact that the appropriate treatment with organ extract produces a return to normal and that there is a definite disproportion between the rise in systolic and diastolic pressure. He advises the control of the treatment by frequent, preferably daily, pressure readings.

[1] April-May, 1916, p. 19.

[2] Surgery, Gyn., and Obstet., Dec., 1916, p. 667.

EDITORIAL COMMENT.

Los Angeles county is the seat of a valuable innovation in public health work which, so far as our information extends, is the first instance of its kind in the west. In its usual pioneering style, the New York City Board of Health has for some time been doing similar work. Dr. J. L. Pomeroy, Health Officer of Los Angeles county, has had produced, in motion pictures, the story of diphtheria spread and control, and the 1100 feet of the film are to be used widely in that county at motion picture theaters as a measure of public education in the proper means of control of this disease. The pictures appeal to the lay intelligence in a fashion which is more authoritative and better remembered than either lecture or bulletin. These or similar films should be in the armamentarium of every health officer in the state. Those counties which cannot produce their own would do well to arrange for the loan or rental of films already made. See description under Los Angeles county news.

Why should not every doctor in the United States who is mentally, physically and morally fit, be in the M. R. C.? In the immediate future the Medical Reserve Corps must be immensely augmented and so as to enable the Surgeon-General to have at his command for immediate assignment, as conditions demand, a sufficient number of trained medical officers, let us take the above thought seriously. The German war depends for its success as much upon the medical profession, as upon the combatant forces, and while we do not know that any such intention as herein suggested, is in the mind of the Surgeon-General, it would at least give him the necessary corps of medical officers, from which to draw, and would serve the best interests of our country, and the best interests of the medical officers themselves.

Social and health insurance are topics of pertinent concern to the physicians of the state. The principle may be wrong, or inadequate or even unnecessary, and social insurance may be to the disadvantage of the individual doctor, especially in rural and small town communities. It may be unsound economically and will certainly require special safeguarding politically. But whatever its disadvantages, and they are many, it has certain merits and the fact is to be remembered that legislation establishing some form of social insurance seems certain to be enacted in California in the near future. If the medical profession does not direct and help work out this legislation, the profession will have only itself to thank for any injustice or disadvantage which may arise out of its operation. Whether we believe in the principle or not, we should be informed of the various features involved and be prepared to give intelligent and constructive criticism in the crisis approaching. By correspondence and special articles, it is urged that every point of view and argument pro or con, be sent to the JOURNAL for the use of the profession of the state.

Considerable attention has been devoted recently in the medical press to the food value of the banana. The banana has a high content of available and easily assimilable carbohydrate and forms an excellent food for adults and children alike. It is only necessary to be sure that the skin is unbroken and the fruit thoroughly ripe. The housewife has not begun to realize the possibilities of the banana in cookery. Many appetizing and nutritious dishes can be prepared from it. Details of such preparation can be secured on inquiry. Moreover it is to be remembered that the banana has, perhaps, advanced in cost as little as any staple article of food and is among the cheapest and best food sources now to be had.

Will you please once more scan the list of county editors and then turn to the department of county news and see how well each is doing his work. Fifteen counties are not yet represented and their tardiness in electing their associate editor is a reflection on them and a handicap to the work of the state organization in the development of the JOURNAL. Please let every line be filled by the next issue.

Several deaths have been reported as caused by gases discharged by the exhaust pipe of internal combustion engines. In two cases the victims had kept the engine of their automobile running while the car was in a small garage whose doors were closed. These accidents call renewed attention to the poisonous character of the exhaust gases, and should serve as a warning to all car owners. Incidentally they emphasize the danger of using the exhaust gases for heating purposes, as is done in some of our public conveyances. Unless extreme care is exercised a leakage of gas is liable to occur with a consequent exposure of passengers to the poisonous gases.—N. Y. Dept. of Health.

Special Articles

THE ARMY MEDICAL EXAMINATIONS OF THE FIRST DRAFT.

By HARRY B. REYNOLDS, Major M. R. C.,
Medical Examiner for 91st Division, N. A.

The mustering of the first draft of the National Army is now completed, and the data is available on which may be based fair judgment of the efficiency of the machinery employed. Approximately forty-eight thousand men have been received at Camp Lewis. They have come from Montana, Wyoming, Idaho, Washington, Oregon, California Utah, Nevada and Alaska.

In general certain statements may be made not entirely pertinent to the medical subject of this paper, but of extreme interest to the thousands of patriotic citizens behind the army. It has been a matter of the keenest admiration of the Mustering Office to see the unfolding of the marvelously efficient plan of the Provost Marshal General. To devise and perfect the system, to foresee the difficulties and complications, to plan for the correction of errors due to untrained citizen personnel is recognized as an enormous task that has been marvelously accomplished.

Secondly, the work of the local boards has come to be recognized in this office as a highly satisfactory accomplishment.

To develop an organization during the progress of an essential task is a difficulty undertaking. Many of the complications were foreseen and provided for. Many more have been encountered that were not foreseen and it is safe to say that the next draft will be handled on a higher scale of efficiency. The patriotic zeal of these boards is highly commendable, and when the enormous total was appreciated and the small percentage of error was realized and when the total draft was examined and a survey made, results were very gratifying.

The cases of error in certification aggregated a total that was all too large and that should certainly not be repeated in future drafts. That it may be avoided, an analysis of the causes may be of value.

1. Many local boards were overworked or furnished inadequate time, personnel or equipment. In this way the quota of the City of Butte was estimated on a basis of 43,000 population and when it was realized that 93,000 was a closer estimate the quota was commensurately increased with no increased allowance in personnel or time. In consequence Butte sent in many errors due to this cause.

2. Cases were certified on which the examining physicians disagreed. When one man was rejected, the second examination was often required. The second examiner frequently recommended acceptance when the physical defect was very evidently disqualifying. These cases were fairly frequent. They can be explained on one of two counts, either the doctor was unfamiliar with army qualifications or he was openly and culpably favoring a candidate.

3. In certain instances of fairly frequent occur-

rence both examiners recommended rejection and yet the Board took it upon themselves to certify the candidate. Frequently an explanatory notation was made, as exemplified in the case of a man with evident and active tuberculosis where the clerks naively noted, "the man is technically disqualified but I believe the change will help him." Another man with a weight only slightly over a hundred pounds was certified with the note, "the exercise will do him good." Incidentally the man is expected to do a day's march with a load equal to half his body weight. These errors, too, are individual. In some cases the wrong has been so gross as to evoke an expression of a minority vote of a member against the certification.

4. In some cases the open accusation of favoritism, supported by seemingly sufficient evidence, has been noted. These, however, have been very infrequent and it merely expresses the irreducible minimum of injustice and corruption in human nature and is in no way a commentary on our American citizenship.

Eleven per cent. of the men sent to Camp Lewis have been sent home. This means 5200 men. It is undoubtedly high and yet many have gone through this office on trial who have later been discharged on certificate of disability. These will add another two per cent. In other words, more than 6000 men have been sent here at large expense to the Government and at the needless discomfort of the men themselves and the dislocation of their business affairs. It is difficult to say what a normal or justifiable percentage of rejections should be. Personally I am more tolerant of error than at the beginning of the work, for certainly there have been cases accepted in error by our office whose acceptance is in no way justifiable. These are due to clerical errors, confusion and haste, and yet they are errors for which I would have had little sympathy at the beginning of the muster work.

I believe the greater familiarity of the Examiners and Boards with the work, a keener appreciation of army standards, the elimination of inefficient examiners and men of the politician class, should reduce the rejections to six per cent. of the next draft.

The following table is compiled to show the chief causes of rejections in the order of their frequency. A careful study of the figures will enable the local examiners to see wherein they have been at fault and to avoid the repetition of the errors in the subsequent drafts.

Percentages of Rejections.
with causes.

Total examined to Nov. 22, 1917		46,750	
Total rejections		5,310	
Per cent. rejected to Nov. 22, 1917		11.3%	
Individual causes for rejection with percentages are as follows:			
Eyes:			
Vision	651		12%
Strabismus	40		
		698	
Ears:			
Hearing	33		
Otitis media with dischg.	238		4%
		271	
Defective teeth		379	6%
Deficient weight		611	12%
Deficient height		18	
Deficient chest measurements		20	
Hernia:			
Inguinal	451		
Post operative	41		
Others	6		
		498	7%
Undescended testicle		113	2%
Varicocele		3	
Tuberculosis pulmonary	294		6%
Chronic bronchitis	18		
Pleurisy	13		
Old empyema	58		
		383	7%
Organic heart		405	7%
Flat feet	162		
Pes cavus	7		
Other deformities	103		
		272	
Goitre:			
Simple	48		
Hyperthyroidism	52		
		100	2%
Asthma		47	1%
Fractures with bad results		21	
Ankyloses:			
Elbow	91		
Shoulder	11		
Wrist	19		
Knee	37		
Fingers	43		
Ankle	53		
		254	5%
Deformities:			
Hip	7		
Leg	71		
Hand	101		
Atrophy of leg	10		
Shoulder	7		
Miscellaneous	71		
		267	5%
Internal derangement of knee		26	
Spinal deformities:			
Kyphosis	22		
Scoliosis	17		
Ankylosis	7		
Potts (healed)	5		
Arthritis	6		
		57	
Osteomyelitis		11	
Arthritis:			
Sacro iliac	4		
Hip	4		
Ankle	2		
Knee	7		
Shoulder	2		
Miscellaneous	84		
		103	
Neuro pschiatric:			
Mentally deficient	83		
Temperamentally unfit	31		
Insanity	13		
Epilepsy	23		
Tabes	5		
Stammering	15		
Paralysis agitans	1		
Multiple sclerosis	6		
Syringo myelia	1		
		178	

Syphilis	75
Incomplete rec. from operation	9
Loss of fingers	93
Physically deficient	31
Tumors	20
Skin Diseases	29
Congenital defects	21
Enuresis	6
Drug user	7
Rheumatism	7
Tuberculosis other than lungs	26
Varicose veins	67
Hemorrhoids	28
Miscellaneous	124

Six hundred and fifty men is too many when the vision tests can be so readily applied and the standards for acceptance are so clearly stated.

Discharging ears numbered two hundred and seventy-one. Many of these were evident by odor and by vision without a speculum. More than six hundred men were rejected for defective weights. With scales and a clearly marked standard none of these should have been certified. It might be well to direct attention to the fact that 110 pounds is the minimum and that the minimum figures given for different weights in the tables represent the irreducible minimum. Careful reading of the instructions for physical examinations and of memorandum 9 shows that no further allowances or reductions are permitted. Directions regarding height also seem ludicrously simple. Careful examination should discover practically all the hernias of any size. They are always disqualifying, yet more than 500 cases were rejected for this cause alone.

There is more excuse for certifying men with organic hearts to the number of 400. There is more room for opinion in these cases and standards are not so clearly established. However the English and Canadian Army have found that many of these seemingly compensated old organic hearts break down in service, and are now drawing the lines close.

Tuberculosis, ankylosed joints, painful union of fractures, painful flat feet should be excluded. It is to be remembered that not all pronated feet are disqualifying flat feet.

The table below shows the percentage of rejections by states. It can be seen at a glance that the errors were very evenly distributed over the states and that the mistakes were apparently due to the inexperience or misunderstanding on the part of the examiners everywhere.

PERCENTAGE OF REJECTION BY STATES.

	Quota sent.	Rejected.	Percent.
Nevada	1,051	103	9.08%
Montana	7,877	807	10.02%
Idaho	2,287	253	11.06%
Washington	7,296	810	11.10%
California	23,060	2,639	11.44%
Oregon	717	83	11.57%
Utah	2,370	299	12.02%
Wyoming	805	101	12.05%
	45,463	5,095	11.02%

In general it may be said that the Government wants strong men with vigorous physique and endurance. This consideration, with careful study of the instructions, should avoid a repetition of the errors of the last draft.

Finally it may be said that the Western and North Western States have produced a division of some 35,000 men that equals any similar body of men in the world. No one could have stood as I did a week ago and see this division pass in review before the commanding general without a thrill of pride and an assurance that this husky, willing, patriotic body of men will go a long way toward making the world safe for democracy.

Sanitary Train, 91st Division, Camp Lewis, Wash.

TENTATIVE REPORT ON SOCIAL INSURANCE.

By Committee of Los Angeles County Medical Society. DR. WILLIAM WENZLICK, Chairman; DR. J. ROSS MOORE, and DR. T. PERCIVAL GERSON.

INTRODUCTORY REMARKS BY THE CHAIRMAN.

The purpose of a Health Insurance Act is to enable a wage worker to meet the expenses of his illness and to compensate him to some extent for the loss of his wages, upon which he and his family depend for their sustenance.

The other object of Health Insurance, the greater of the two, not only directly benefits the worker, but also the public in general, by improving living, housing and factory conditions in the effort of lowering the rate of insurance contributions on the part of the employees and employers, thus assisting State and County Health Departments.

The argument that compulsory insurance is not consistent with American liberty seems contrary to facts, for we actually have compulsory insurance at present, though not called by that name, nor as efficient as it should be. The people namely, are made up of employers and employees compelled by the state to pay taxes for the support of state and local health measures under direction of our many health departments, our hospitals, asylums, dispensaries, and all kinds of charities so odious to the laborer who wants justice.

The liberty of the wage-worker differs from that of his European brother principally in his right to refuse the starvation wages, if he is willing to join the great army of the unemployed on their way to the Potter's Field. The employer has the right and is at liberty to increase his profits by securing younger and more efficient help. In the slavery of other times, the superannuated were cared for as a recompense for their former services.

The poor as ultimate consumers pay all the taxes, expenses and profits of the men who own all the property, and also pay the taxes for the charity doled out to them. What slavery is more abject and humiliating than such individual liberty? In primitive times the individual considered *himself* only, in a higher civilization the individual must yield to social justice. Like a chain that is no stronger than its weakest link, so the degree of a community's civilization may be estimated by the welfare of its poorest class.

In Europe compulsory social insurance prevents all this inhumanity. Shall a free people be more intolerant of social progress?

The medical profession has the reputation of being altruistic, of furthering prophylactic and sanitary measures at the expense of its members, who also give their professional services gratis to the needy, because the practice of medicine is a profession and not a business. We will not forget our many civic duties.

While social insurance may not altogether remove poverty and unemployment and their sequences of disease, vice and crime, as might be done by means of a Federal Farm School in every state for the unemployed who, when found able to support their dependents, be allotted farms in severance, yet social insurance is a step in the right direction, especially if adopted by all the states and culminating in uniform federal laws.

Let us not be intolerant of those who are less conservative because of new though progressive ideas; on the contrary let us be prepared to meet any emergency in case a State Health Insurance Act should be proposed. Let the profession too be ready to take an intelligent stand for its own interests and for that of the public.

We must act in harmony and come to some conclusion one way or another. Adverse criticism is as important as favorable views in clearing up many difficulties that confront us because of the numerous details and factors which enter into this complex subject. Let us finally agree on some plan and be "a unit" as Dr. Gibbons urged.

If we favor Health Insurance we will be obliged, in all probability, to take into the panel every licensed practitioner. We must not let the public think that we have no sense of civic duty or public interest for our commonweal. We must not be entirely absorbed in our own affairs, although we rightfully should protect our interest as much as possible when not conflicting with our public duty.

If we came to the conclusion that the measure should be defeated, then let it be known that we are heartily in favor of Health Insurance, but for the people's good and the community's health, it is necessary to appoint all officers and members of the panels from the regular profession to the exclusion of homeopaths, eclectics, osteopaths, and others. The 6000 physicians of California will then surely be opposed by many of the 3,000,000 inhabitants of our great state. In either case our motives will be questioned.

The State Social Health Insurance Committee of the Los Angeles County Medical Association approves of the following features of a tentative health insurance act, based on one recommended by the Committee of State Social Insurance of the American Association for Labor Legislation, i. e.:

1. Compulsory State Insurance for wage workers earning less than $100 per month.

2. Voluntary State Insurance for those earning more.

3. Care by the State of the unemployed, and by the State and employers of all wage workers getting less than $40 per month, and of all casual employees.

4. Benefits are to be paid in case of sickness or accident or for death not covered by workmen's compensation.

5. Minimum benefits to consist of medical, surgical and nursing attendance; medicines and surgical supplies; cash benefits; maternity benefits; funeral benefits and medical and surgical attendance and medicines for dependents.

6. Medical services shall be provided by the district funds with approval of commission, by means of a panel composed of all legally qualified practitioners residing in that locality.

7. *Free choice of practitioners* shall be accorded the insured.

8. The number of insured a practitioner may treat shall be limited to one thousand persons or to five hundred families.

9. Each district is to have a *medical officer* as referee to provide certificates of disability and supervise medical service.

10. *Medical Supplies,* etc., are not to exceed $50 per insured within one year.

11. *Hospital Treatment* shall be given when necessary in place of other benefits, with a cash benefit to dependents equal to one-third of wages of insured member for the family while the insured is in the hospital.

12. The *Cash Benefits* of insured are not to exceed twenty-six weeks a year.

13. *Periods of Payments* should be weekly or semi-monthly.

14. *Maternity Benefits* are for eight weeks, six of which are to be after delivery if insured abstains from work for that length of time.

15. *Funeral Benefits* of $50 shall be allowed to next of kin, though six months have not elapsed after exhausting the sick benefit for the year.

16. The *Insurance* shall be *extended* when contributions have ceased because of unemployment not due to sickness and shall continue in force one week for each month of paid up membership.

17. *Division of Expenses* are to be met by the State contributing 10% of the total expenses; 50% by the employee and 40% by the employer.

18. The *Amount of Contributions* shall be computed to meet expenses of administration of the fund and reserve fund, and for payment of benefits.

19. The *Rates of Contribution* shall be the percentage rate according to industrial and sickness experience.

20. *Insurance Carriers.* The Commission shall *divide* the *State* into *districts* of not less than 5,000 persons with one or more local funds for each district.

21. The *Insurance Commission* shall *authorize* the funds after approval of constitution, etc.

22. The *Fund* or *Carrier* is to have the necessary *power* to carry on its duties, to have a constitution containing name, location of fund, trade, if such, etc.

23. The *Committee of the Fund* is to consist of not less than twenty members, elected annually in equal numbers from employer and employee members.

24. The *Board of Directors* is to be elected

by the committee of the fund, consisting of no less than eight and no more than eighteen directors, one-half by employers, the other half by the employees.

25. A *Reserve Fund* is to be accumulated by the board of directors; 1-20 of the annual income until reserve equals 1-6 of the total expenditure for the preceding three years.

26. The employer must *pay* to local or trade fund, at least monthly *contributions* due from him and his employees, deducting the worker's dues from his wages.

27. *Membership in Fund.* Every person subject to insurance must be a member, unless he be a member of an approved society.

28. An *Approved Society* may be a labor union, benevolent or fraternal society, or an establishment society, if approved by the commissioner.

Such society must not be carried on for profit; must not be under control of insured members; must be in a sound financial condition; must not endanger the existence of any local or trade fund.

29. *Employer's Contributions* shall be the same to the fund, though employees are insured in labor unions, benevolent or fraternal societies.

30. The *State* is to *contribute* to every approved society 1-10 of the total expenses.

31. A *Health Insurance Union* may be formed from two or more insurance carriers controlled by the Commission.

32. The *Guarantee Fund* consists of 10% reserved by the Commission from the contribution of the state to the carriers for the relief of any carrier if an emergency should arise in the judgment of the Commission, because of epidemics or other unusual conditions.

33. *State Supervision.* The *Social Insurance Commission* is to consist of three Commissioners appointed by the Governor, one of whom is to be a physician. Each Commissioner is to devote his entire time to the duties of his office.

34. The Commission shall appoint a *Secretary,* officers, and other assistants, and employees as may be necessary. All of them to be under Civil Service rule.

35. The Commission is to receive a *salary;* the Commissioners and the subordinates are entitled to actual and necessary expenses while traveling on business, the expenses are to be paid out of the State Treasury upon vouchers signed by at least two Commissioners. The office shall be in the capitol, and branch offices as advisable in other cities.

36. Any *Commissioner* can conduct inquiry or hearing, etc., which the Commission is authorized to do, if approved by the Commission.

37. The Commission is to make a *report* to the Governor which he shall lay before the Legislature, giving statistics of their work, and recommendations if desired.

38. The *State Social Insurance Council* shall consist of twelve members; an equal number from employers and employees.

39. The *State Council* is to elect its own president; the Secretary of the Commission is to act as secretary of the Council.

40. The annual report of the Commission and its recommendations shall be laid before the Council, before transmission to the Governor. The Council may approve them or make a separate report.

41. A *State Medical Advisory Board* shall be chosen by the state medical societies. It is to be consulted on medical matters.

42. *Disputes shall be settled* by the Social Insurance Commission on appeal from proper authority or carrier. The Commission may assign any dispute to a *Dispute Committee,* composed of employer and employee members of the Council and a member of the Commission as chairman. Either party may appeal from Dispute Committee to the Commission within 30 days.

43. *Medical Disputes* regarding benefits appealed to Commission shall be referred to the Medical Advisory Board, which is to report to the Commission.

44. *Suits at Law* which can be appealed to the Commission shall not be taken to court until decided by the Commission.

Original Articles

TUBERCULOSIS OF THE EYE.

By PHILIP H. PIERSON, M. D., San Francisco, Cal.

The object of this paper, written as it is by an internist, is four-fold—(1) to briefly touch on the blood supply and lymphatics of the eye, illustrating the probable method of infection and spread of tuberculosis; (2) to describe the main characteristics of the most frequently encountered tubercular lesions; (3) and of chief importance, the method at our disposal for diagnosing stubborn and puzzling eye conditions where tuberculosis should be considered; and, lastly, treatment and prognosis.

Tuberculosis in the eye as in other parts of the body, is spread in one or all of three ways; chiefly by the lymphatic system producing tubercles with their attendant consequences—enlargement, caseation and breaking down, less frequently by the blood stream transmitting the toxins more often than the bacilli to vascular organs (except in miliary tuberculosis), and, lastly, by contact. This last method is more correctly the local progress of the disease than its entrance into one or more parts of the body.

First let me take up the lymphatics of the eye. In the lids there are lymphatic channels anterior and posterior to the tarsus which intercommunicate and drain to the preauricular, submaxilary and anterior cervical glands. It is for this reason that these glands are generally involved, in lesions of the lids proper or the conjunctivae. The cornea contains practically no blood vessels or lymphatics, but there are clefts between the layers of the epithelium which are easily invaded by toxins or bacteria circulating in the blood vessels which are present and terminate in anastimoses at the corneal edge of the sclera. It is probably in this way that lesions occur in the cornea. They may also be the result of contact with the iris when this is involved. Another important lymph circulation is found in

the blood vessel walls of the choroid. These vorticose veins have an endothelial lining but no muscular coat whatsoever. Outside this endothelial lining there are lymph spaces—the so-called perivascular lymph spaces of His. Is it not very probably due to these lymphatics rather than the blood stream that we find tubercles singly or miliary of the choroid and from this diseased condition of the choroid the so-called retinitis proliferans with hemorrhage in youth. These perivascular lymph spaces communicate and make their way about the lamina cribrosa into clefts in the sheath of the optic nerve. From this point they penetrate into the lymph spaces existing between the pia, arachnoid and dura, which are continuous back over the brain surface. There are channels in the sclera which intercommunicate and pass to the outer surface of the sclera and drain extraduraly. It is by this path that tubercles of the choroid occur in the terminal stages of tubercular meningitis. Whether or not the hyaloid canal exists after fetal life as a communicating canal from the anterior to the posterior part of the eye is a question. Iris and ciliary body lesions may be toxic due to the vascular condition of these structures or here we may have a blood born infection. In tubercular lesions of the iris we sometimes find that it is adherent to the cornea (generally if proper care has not been taken to prevent it), and a tubercular lesion in the cornea results from direct extention. This brief description of the lymphatics I trust may make the source and correlation of some of these eye lesions more evident. Allow me here to emphasize the lymphatic system as a harborer of latent tuberculosis, and the lymphatic glands of the body should always be investigated as the possible and probable focus for eye tuberculosis, even in the face of an evident lung or bone condition.

The frequency with which tuberculosis affects the eye has been estimated as far back as 1885 by P. H. Mules as 1 in 33,000 eye patients, more recently by Eyre as 1 in 2,700, and in 1913 by Stephenson as 1 in every 1000 cases. From this it is easily seen that while it is not a frequent manifestation of tuberculosis it is becoming more frequently recognized. This I believe is due to our increasing knowledge of how tuberculosis spreads and especially to the more general use of tuberculin as a diagnostic and therapeutic agent.

Let us briefly consider tubercular manifestations in the conjunctiva, cornea, iris and choroid as being probably the most frequent sites in the eye. The first definite case of conjunctival tuberculosis was described by Koester in 1873. It is estimated by Eyre as occurring in 1 out of every 3,000 eye cases and by Lagrange as in 1 out of every 7,500 cases. It is a disease generally met with in persons under 30, more often unilateral, and may be primary according to Ayrand, or secondary to extension from the lacrimal sac or elsewhere in the body. A case was reported by Gourfein in which no other tuberculosis was demonstrable and which later developed brain and pulmonary tuberculosis. When primary the organism gains entrance through some abrasion in the conjunctiva. It is found more often on the tarsal conjunctiva and may be one of three types—nodular, ulcerating or vegetating. If nodular it presents a red, swollen, hard, gristle-like granule, the size of a millet seed. If there are several they may unite, casefy and ulcerate. The edges of the ulcer are irregular and it is covered with a yellowish grey fibrinous film. When this is situated near the palpabral border cicatrising deformities may ensue. In the vegetating type there is either a cock's comb vegetation or papillary pseudo trachomatous condition. In all these types there are but few reactionary signs or symptoms. The patient may have the sensation of a foreign body in his eye but no pain; his lid may be slightly swollen and the bulbar conjunctiva echimotic. There is lacrimation and a slight muco purulent secretion. There is practically always glandular involvement, taking in first the preauricular glands, then the submaxillary, and later all the cervical chain. This insidious onset is followed by very slow development. The vegetating type is generally benign, but the ulcerating type is serious and, according to Armaignac, is complicated by laryngeal and pulmonary tuberculosis, according to Gourfain by cerebral and pulmonary manifestations, meningeal in the experience of Manz and Hock, and articular and pleuro-pulmonary in the observation of Kalt. A tubercular condition of the conjunctiva may extend from a nasal lupus which is more frequent in children. About 7-8% of all lacrimal ducts excised are tubercular, according to Jaulin, Rollet, and other observers. In lupus glandular involvement is not present except where there is secondary infection. The differential diagnosis in such a condition as described above, lies between:

Granular conjunctivitis.

Syphilis—a chancre resting on an indurated base and a gumma, which according to Trousseau has no glandular enlargement.

Sporothrix, which can be established by laboratory smears.

Epithelioma.

Parinauds conjunctivitis, which generally heals spontaneously without ulceration, and

Phlyctenular conjunctivitis.

This last condition has and will continue to be the cause of discussion as to whether it is tubercular or not. Pyfer considers it a tuberculous manifestation rather than an actual tubercular lesion. Derby found 73%-83% positive tuberculin reactions in this condition. So far as I have been able to ascertain phlyctenules do not contain tubercle bacilli, nor injected into animals do they cause tuberculosis. They are very frequently found in the scrofulous child, this condition being due to tuberculosis or a chronic focal infection in teeth, tonsils, etc., or in tuberculous adults—more of a reaction to their lack of general resistance than to an actual tubercular disease. The treatment of conjunctival tuberculosis consists in excision of the diseased area when it is local and there are no involved glands, cauterization and sometimes scarification and curetting. I shall speak of tuberculin treatment as a whole in a few minutes.

Interstitial keratitis was described by McKenzie as far back as 1830 as "Scrofulous corneitis." As a primary disease of the cornea it does not exist.

Whether the organisms or their toxins cause corneal lesions is still doubtful, according to Fuchs. Verhoff produced a tuberculosis of the cornea in the eye of a rabbit by injecting dead organisms into the aqueous humor of the anterior chamber and in three months found lesions similar to those seen clinically coexisting with small tubercles of the iris and ciliary body. Clinically it is found together with conjunctival or irido-ciliary lesions. The superficial or ulcerating type is found coexistant with nasal conjunctival lupus or palpebral conjunctivitis. On the cornea there are greyish yellow nodules causing the cornea to look roughened. By their coalescence ulceration takes place. The infiltrated or deep form follows in iris lesions and resembles an interstitial keratitis of luetic origin, differing from it nevertheless in that the latter leaves practically no opacities, while tuberculosis after healing leaves the infiltration of lymphocytes and their resulting haziness. The pathology of these lesions is an infiltration of giant cells surrounded by epitheliod cells and lymphocytes. The differential diagnosis lies between syphilis, leprosy and trachoma.

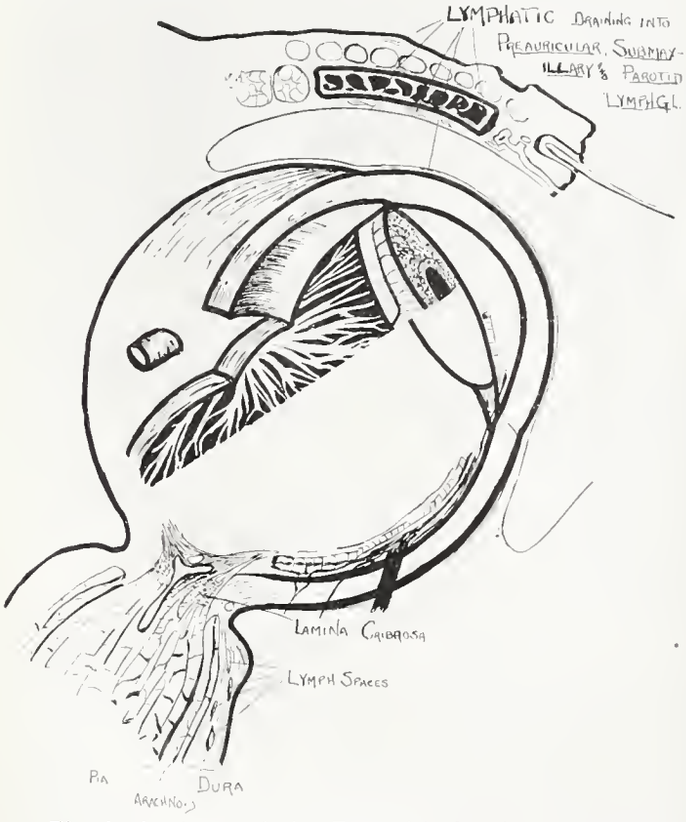


Fig. I—Anatomy of the Eye with Special Reference to Lymphatics.

I have recently had three cases of tubercular disease of the cornea; two were in patients with advanced pulmonary lesions, and the other in a Hindu with very incipient tuberculosis. The latter had been treated without avail with mercury and Potassium iodide. He presented definitely harsh breathing at his right apex, with a patch of consonating rales in his right axilla. Under careful hygiene and tuberculin his eye quickly cleared up, and remained so until he went back to farming, when he had a recrudescence which again cleared up under tuberculin. One of the other cases was that of a young woman at Arequipa Sanatorium whose eye rather suddenly became red, the superficial and deep vessels of the conjunctiva and sclera became injected and an infiltration of cells took place. Atropine was used locally, and at first she could not stand the increasing doses of tuberculin because of her extensive lung involvement although she was afebrile. But by repeating the same small dose of tuberculin for a few times she was able to develop more tolerance. Before long the inflammatory reaction had subsided leaving the haziness due to infiltration of lymphocytes and scar tissue. The third case was running considerable fever, and tuberculin could not be used. Her ulceration persisted for a longer time, but finally healed. She had had a similar keratitis when about 18 months old, associated with cervical adenitis, and the old scars in the cornea were visible.

Tuberculosis of the uveal tract is spoken of in the literature as one of the most common forms

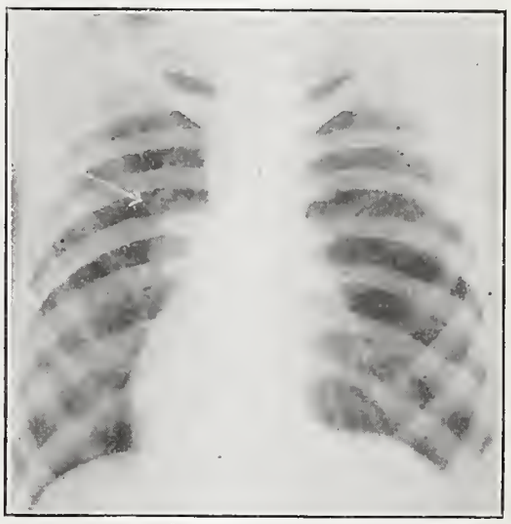


Fig. II—Bronchial Glands.

of tuberculosis. It may attack the iris, ciliary body and choroid, singly or en masse. Often when the iris is affected the others are involved by continuity, and the cornea and even lens may be involved by pressure. In 1890, Julius Von Michel maintained that inflammations of the iris due to tuberculosis were almost as common as those due to syphilis. This manifestation may be in the form of a solitary or miliary tubercle or it may be a diffuse process due to the toxins and not to the organisms themselves. The condition is practically always endogenous in origin although the individual is frequently in an apparently healthy and even robust condition. 85% of these cases appear before the age of 30, and a large solitary tubercle is more common in the child under ten. This is one of the most serious lesions of the eye, leading often to glaucoma, necessitating removal of the eye for the relief of pain, without influencing the course of the disease from the general constitutional standpoint. The disease in adolescence and adult life is relatively benign but does cause considerable diminution in the acuity of vision from a purely mechanical point of view. In the plastic non-purulent type it is difficult to distinguish from other types of iritis at the beginning, although the inflammatory reaction is less than in syphilis. The progress in

the types other than the solitary tubercle is chronic, tending toward spontaneous healing. Prognosis should be guarded because of the involvement of other tissues by contact, and the dimness of vision resulting. The chief differential diagnosis must be made from syphilis, which when a gumma generally leaves a browner pigment than tuberculosis; lipoma, sarcoma and sporothrix. Few individuals will permit of the excision of a piece for pathological examination and injection into a guinea pig or rabbit's eye. Some of the aqueous humor may be withdrawn and when injected often produces positive results. According to Terrien and Dantrelle, the aqueous humor in tuberculosis is very coagulable. Syphilitic choro-retinitis is more frequently found than is tubercular. The perivascular lymph space of His, it seems to me, plays a very important role as a means of entrance of the disease to the choroid. The diffuseness of the infection gives the appearance of a blood-borne disease, when it is in reality a lymphatic disease. Definite tubercles are found at times in the miliary type when they appear in the ophthalmoscope as fine grayish yellow, round nodules, about one mm. in diameter, with a clear center and a pink border, and may be differentiated from inflammatory nodules by the fact that the latter possess more pigment in their periphery. The hemorrhages that are present in the diffuse process during adolescence are very possibly due to the breaking down of the tubercular disease in the lymphatics, which are in very close proximity to the veins. These generally recover, leaving evidence of the choroidal atrophy. This condition, according to Stock and Axenfeld, is very frequently due to tuberculosis. The occurence of choroidal tubercles in tubercular meningitis has provoked considerable difference of opinion. Dupuy-Dutemps have never found tubercles in such cases. According to Jackson and others, it is not very uncommon to find these choroidal tubercles in the terminal stages of tubercular meningitis or a miliary tuberculosis, new tubercles appearing every day and of course never attaining any considerable size because of the death of the patient. The lymphatic connection of the choroid by way of the optic sheath and thence to the meninges makes it seem very probable to me that tubercles may be found at such a stage of tuberculous meningitis.

I wish to spend the rest of my time on what seems to me the most important part of this subject, and that is the methods at our disposal for diagnosing chronic, unexplainable eye lesions, and then a few words as to the advisability and usefulness of tuberculin as a therapeutic agent. It seems rather elementary to speak of the importance of a careful history; but this will often throw such light on a doubtful case that other possibilities are considered at once. Of special importance in a possible tuberculous case I would mention the following: (1) general health in childhood, whether always a weak child or strong and robust; (2) glands, these may have subsided with only a small scar remaining; (3) pleurisy; (4) ambition, whether able and anxious to do daily work; (5) the question as to loss of weight. Because of the small focus of possible tuberculosis we can not expect the more pronounced symptoms of extensive disease. Many times there are points like these that would not occur to the patient himself to mention, but which are of great importance when answered in the affirmative or negative. The general health of most patients with tuberculosis of the eye is remarkably good, and this may be misleading. But the insidious nature of the progress of tuberculosis, the fact that such a small focus is spreading toxins into the system, and the recognition that such a large percentage of us all have at some time been infected, makes it a diagnosis not to be dismissed by the appearance of the individual. A careful physical examination with special reference to general adenopathy, with scars resulting from old discharging wounds in glandular regions, old perforations in the ears which may elicit a story of a chronic discharging ear during childhood; a more rapid heart than can be accounted for by other signs; careful examination of the lungs for an old thickened pleura which may have developed without the frequent pleural pains that are common; suspicious signs of excessive scar tissue in the apex or elsewhere in the lung, and particularly a careful examination of the hilus (bronchial) glands. It is impossible to obtain as much information concerning this most important focus by ordinary physical signs as it is by x-ray pictures of the chest. The plates which I have shown illustrate different hilus shadows and those which I consider of particular importance as of diagnostic value. Whether or not the bronchial glands are the primary source of trouble in the lungs or secondary to some peripheral process, as Gohn claims, I will not discuss here, although I am still inclined toward the former view, they are a very frequent source of trouble and I can not emphasize too strongly a careful examination of them. As to laboratory tests: I believe that as we all use the Wassermann test almost as a routine we should use the subcutaneous tuberculin test in doubtful cases much more than it has been used. Now that I have mentioned tuberculin may I briefly review the different kinds and why one kind may have more value than another. The kinds most frequently used are: Koch's Original Tuberculin, Bacillary Emulsion, Bouillon Filtrate and Tuberculin R. OT is the filtrate of the killed bacilli and hence only the soluble exogenous toxins and none of those insoluble in the bacilli. This stimulates the body cells to form antibodies but has not the bacteriocidal properties that the endotoxins possess. This preparation is concentrated by heat. Denny's Bouillon Filtrate—BF—is similar, except that it has not been heated for concentration. The Bacillary Emulsion—BE—is a preparation of dead organisms and their soluble toxins and so contains exogenous and endogenous toxins. TR is a washed suspension of the dead bacilli and so contains the endogenous toxins. So it can be seen that the bacteriocidal properties are contained only in those with the dead organisms —BE and TR, while BF and OT act more as stimulators to body resisting powers. These are in reality largely theoretical matters and there are good men using almost exclusively one or another of these different preparations as well as many

others, including foreign perparations, and each believes he has better results with that particular kind than with others. OT is used almost exclusively for diagnostic purposes. A great many use TR. At Saranac and elsewhere, equal parts of BE and BF are used in treatment. I favor this last combination because it theoretically at least contains both properties. The question is often raised as to whether it is more efficacious to use Human or Bovine tuberculin. Romer's work on this subject, in which he injected tuberculin made from human, bovine and avian tubercle bacilli into animals infected with human, bovine and avian tuberculosis, and found no difference in the reactions, concluded that "human and bovine tuberculin are so identical in their action on infected animals that we may neglect the source." Koch's original idea as to what caused the febrile reaction to tuberculin was that the injected material had a specific action on the tubercular tissue causing it to slough, and it was the absorption of this necrotic material which caused the rise in temperature. This view is no longer held and now it is considered by Hamman, Wolman and others to be a specific protein anaphylactic reaction involving the protein substance of the bacillus injected or their soluble toxins, and the tubercular tissue. Immunity is produced by the stimulating effect of these endogenous and exogenous toxins on the body to produce more antibodies. We are doing this throughout life with the live organisms that have found their way into our systems, but it has not proven safe or wise to use live organisms in this immunization, for live organisms have been recovered three years after having been injected intravenously into animals. Immunity produced independently of tuberculin or in conjunction with it is only of a relatively amount and duration and an overwhelming infection may easily overcome the existing protection.

I wish to make a plea for the more frequent use of tuberculin in diagnosis and treatment of eye conditions, for it is as specific for tuberculosis as the Wassermann is for syphilis. First, in regard to its use in diagnosis; it may be used on the skin, in the skin or under the skin. The Von Pirquet test is of value, particularly in children and, when it is negative, in adults. Two negative reactions are fairly good proof that there is no active tuberculous disease, although this is by no means final. The most valuable test is the subcutaneous test, and this should not be employed until a thorough physical examination has been made to determine whether there is any latent activity in the lungs or glands. If there is any active disease the diagnostic doses may easily disseminate the process and so do considerable harm. If there is not this danger the doses should be very small at the start, gradually increasing from .1, .3, .7, 1., 1.5, to 2. mgr. A general reaction is not enough, for a great many without eye tuberculosis would react constitutionally to such a dose. But of particular value is the focal reaction in the eye, and to consider the test positive for the eye a change should take place there. After each injection the eye lesion should be examined just as routinely as the temperature chart. The reaction may take the form of tiny grey deposits or thickening of the iris in the inner circle, according to Professor Stock. Haab has seen ciliary and conjunctival injection in one case of disseminated choroiditis, and hemorrhage near the papilla in another patient from diagnostic doses. In another case where the vitreous had become liquefied and contained numerous dense flocculi and the borders of the disc had become very much reddened and there was a white area including the macula, the tuberculin reaction consisted in a hemorrhage in the course of some of the retinal vessels. By this test Axenfeld and Stock found that hemorrhages into the vitreous which commonly accompany retinitis proliferans, were often due to tuberculosis. One of these eyes came to autopsy and while no tubercles were found, the endothelium of the veins was characteristically changed by the tuberculous toxins. Thus a condition often ascribed to pus producing organisms has been shown to be of a tuberculous origin at times. It is much better to use small diagnostic doses in suspicious cases in order to determine the smallest dose which will give a reaction, rather than to do damage by a larger than necessary dose. Gamble has seen a typical reaction in tuberculous iritis with 1/50 mgr., and Stephenson produced a general and focal reaction in two cases of irido cyclitis by 1/1000 mgr. of TR. On the other hand, some cases of definite tuberculosis have not reacted until 6 mgr. were given, but this is far too large a dose to give in safety. A negative focal reaction with a positive general and local reaction is generally sufficient proof that the disease is not tubercular; but I think that there is a great deal of value in the statement of McCool, who says that in spite of a negative focal reaction with a positive general and local reaction where every other possible focus of infection such as teeth, tonsils, accessory sinuses, syphilis, etc., had been excluded, the eye condition should be considered tuberculous and treated as such. Tuberculin and hygiene will build up his resistance to that condition which caused his general reaction, and this will aid in any obscure eye condition.

Finally, in regard to treatment and prognosis: If we consider the eye lesion as probably tubercular we must not put all our faith in tuberculin, without carrying out hygienic measures. This means an inquiry into the habits and occupation of the patient, insisting that his work shall be clean and not fatiguing, that he shall have hours of rest and sleeping out of doors if possible, and that his diet shall consist in plain, simple, nutritious food. This is a very important part of the treatment. Tuberculin is given by one school headed by von Hippel, in doses large enough and frequently enough to produce a slight general and focal reaction. They consider this a necessity for the best immunizing results. This I think is more dangerous than keeping the doses just under the point of giving a reaction. We know that one of the dangers in a reaction is the softening of the tuberculous area and the spreading of the tuberculosis in the blood stream to other parts of the body. Bachmeister examined the blood of fifteen individuals at the

height of the febrile reaction after injection and found the blood positive in four cases. Animal experimentation by Rabinowitch-Kempner found the same to be true. The more conservative school is headed by Wright. He uses BE or TR, starting with 1/80000 or 1/10000 mgr., gradually increasing it at intervals of 10 to 12 days. Von Hippel uses larger doses of BE or TR, beginning with 1/500 mgr., increasing it 1/500 each dose every 2 to 5 days until 1 or 2 mgr. are given. Of course, with either method the patient should be considered individually and no set rule be followed. In using a mixture of BE and BF, I make dilutions up to 1/10,000,000 mgr., gradually increasing the doses till 1/1000 mgr. is reached. This is more applicable to general tuberculosis than to eye tuberculosis, where the dose may be carried further without the dangers of some of the casualties above mentioned. If proper care is taken, these excessive reactions are always avoided. Tuberculous iritis

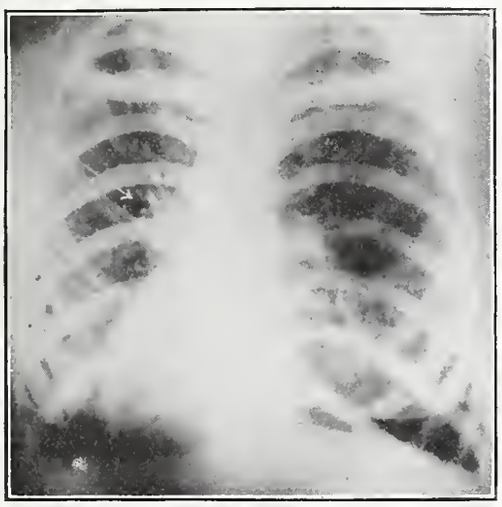


Fig. III—Bronchial Glands.

responds most favorably to this form of treatment and tuberculous conjunctivitis less readily. This may be due to the fact that the conjunctivitis is sometimes a primary source of infection, or it may be due to attenuated organisms. Scleritis, episcleritis and sclerokeratitis also respond favorably to tuberculin. Choroidal lesions respond fairly well, but not as well as do lesions in the anterior segment. One reason for failure sometimes is that it is not continued long enough. At times there is faulty preparation of the tuberculin; another thing it is important to note is that a new set of dilutions is made every 3 or 4 weeks because of its instability. When recurrences take place or relapses occur another kind of tuberculin may be tried with value.

The prognosis should be guarded because of the tendency to recurrence; but the patient can generally be assured that the lesion will not progress further. Many times the clearing up of edema and congestion will give actual improvement in vision. Where there are deformities produced nothing will remove them, and so the acuity of vision is almost always diminished.

In conclusion, let me emphasize the following facts:

(1) The spread of tuberculosis is generally by means of the lymphatics, while the blood stream transmits the toxins and sometimes the tubercle bacillus.

(2) In considering the diagnosis of tuberculosis, careful attention should be given to the lymphatic system and especially the cervical and bronchial glands as latent foci.

(3) The tuberculin test is of great importance and the reaction in the eye should be watched for after each injection, and the endeavor should be made to use the smallest dose that will produce a reaction.

(4) The treatment should be general as well as with tuberculin. This latter is a very powerful agent for good if used carefully and thoroughly.

References.

Traitement de la Tuberculose Oculaire; Archives D'ophthalmologie, May, 1914.
La Tuberculose oculaire A. Moubrun Revue de la Tuberculose 2 series November 14, 1915.
Tuberculosis of the eye, Sydney Stephenson, Lancet, p. 1530.
The diagnostic and therapeutic uses of tuberculin in ocular disease with a review of some of the claims made for it. A. E. Davis, Annals of Ophthalmology, January, 1914.
Relation between rheumatic eye disease and Secondary Tuberculosis. Wirtz, Annals of Ophthalmology, January, 1914.
Tuberculin therapy in ocular disease, W. B. Weidler New York State Journal of Medicine, September, 1915.
Tuberculosis in relation to eye, ear, nose and throat. George H. Kress. Zeitschrift for Tuberculose, Leipzig vol. 24, No. 1, 1915.
Ocular tuberculosis and systemic gonorrhoea, W. C. Posey, the Ophthalmic Record, January, 1916.
Some observations on ocular tuberculosis and its treatment, Jos. L. McCool, the Ophthalmic Record, January, 1916.
Intraocular tuberculosis, Ed. Jackson, the Ophthalmic Record, January, 1916.
Tuberculosis of the eye with special reference to treatment. W. E. Gamble, the Ophthalmic Record, February, 1916.
Present status of the therapy of tuberculosis of the eye, E. Hertel.
Textbook on the eye, Fuchs.
Quain's anatomy.

COMPLEMENT FIXATION IN TUBERCULOSIS.*

By BENJ. JABLONS, M. D., and DOVE E. HART, A. B., San Francisco.

To appreciate the factors entering into the Complement Fixation Reaction for Tuberculosis, it is necessary to keep two points in mind; first, the reaction of the human organism to the Tubercle Bacillus and its derivatives, and second, its reaction to the tissue products resulting from the action of the Tubercle Bacillus. It is known that the introduction of a foreign protein of whatever nature into the body calls forth a specific and a non-specific response. The specific reaction is that evidenced by the mobilization of an antibody, whose nature may be that of either an agglutinin, a precipitin, a bacteriotropin, an opsonin, a bacteriolysin or a complement fixing antibody. Then the non-specific antibodies may also be mobilized and these are chiefly of the ferment and anti-ferment variety. In order therefore to diagnose the presence of an organism that is sufficiently active to call forth a response from the infected body, it is necessary to seek for one or even all of these antibodies.

Complement deviation has been found to be the most delicate test for the detection of the presence of an antibody producing substance. Its

* Read before the Forty-sixth annual meeting of the Medical Society, State of California, Coronado, April, 1917.

delicacy is such that even minimal amounts of proteins can be recognized when brought in contact with their specific antibodies in the presence of complement. This accounts for the strenuous efforts Immunologists have made to apply this test to the diagnosis of tuberculosis since Bordet and Gengou first described their phenomenon.

A great deal of interest has been aroused recently in the subject owing to the fact that several investigators claim to have attained the goal for which they had been striving since the earliest reports of the work of Wassermann and Bruck. The chief difficulty has been to obtain a suitable antigen which would react with the antibodies produced as a result of an infection with the Tubercle Bacillus. This if obtained would solve the problem of early diagnosis of tubercular infections and also determine whether a definite cure was present.

In reviewing the work of various investigators we find that at first preparations of tuberculin were used. Then Widal and Lesourd carried out tests with a homogeneous emulsion of Tubercle Bacilli of the Arloing-Courmont type. Much prepared four partial antigens which were, a lactic acid extract, an alcoholic extract, an ether extract and the protein residue of the Tubercle Bacillus. Besredka in 1913 used as an antigen, a filtrate derived from a medium consisting of a mixture of bouillon, egg white and egg yolk, in which Tubercle Bacilli were grown. Calmette and Massoll in 1912 devised a water and peptone soluble antigen. Among other antigens employed are the alcoholic antigen of Dudgeon, Meek and Weir, and Hirschfelder's pepsin antigen as well as the tissue antigens prepared from normal and tubercular tissues. These constitute the basis for the antigens used by Caulfield, Laird, Fraser, McIntosh, Filde, Radclice and others who have obtained fair results although they have not been able to obviate an anticomplementary effect from these antigens. Products derived from autolysis of Tubercle Bacilli were used as antigen by Corper. Craig in using a modified Besredka antigen reports striking results, however the most encouraging results are those published by Miller who in conjunction with Zinnser, has employed an antigen prepared by triturating living or dead bacilli with dry crystals of ordinary table salt and then adding distilled water up to isotonicity.

It is not necessary to recapitulate all of the results obtained by the various investigators. It suffices that up to the present time the best results have been reported with the antigens of Calmette and Massol, which contain endo-bacillary substances extracted by water and peptone water, and with the tuberculin of Besredka which is a filtrate of an excellent culture medium for Tubercle Bacilli but which is not always specific, and then with the salt extracts of Miller and Zinnser as well as the alcoholic extracts of Craig.

Our first series of tests was carried out with various tuberculins but we soon found that they gave very inconstant results, so alcoholic, distilled water and ethereal extracts were used. These gave binding in some cases but the results were not conclusive. A saline extract of one strain of the human type of Tubercle Bacillus prepared after the method published by Miller and Zinnser, which is briefly, to triturate 20 MG. of dry Tubercle Bacilli with 90 MG. of dry salt and then add 10 cc. of distilled water, gave fair results, but was not constant in a sufficient number of cases. To increase the constancy of results, it was thought that an antigen prepared from as many strains as possible would be of greater value, so we collected from various sources twenty-four strains of the human type, twelve of the bovine type and one of the avian type, making in all thirty-seven strains.

The early tests which we commenced in December, 1916, were for the purpose of determining whether alcohol and ether extracts of Tubercle Bacilli would give as constant results as those obtained with the salt extracts. In a series carried out with the blood serum of patients who who had positive signs and were expectorating bacilli, strong fixations resulted with the salt extract antigen, but reacted negatively with the alcoholic and ether as well as with the acetone insoluble extracts of bacilli. Since then we have carried out all tests with the salt extract antigen which we prepared by scraping off the surface growths from Dorset's egg medium, Lubenau's egg medium or glycerine agar, and collecting them in a sterile thick glass centrifuge tube. A small amount of saline was then added to the tube and its contents placed in a water bath maintained at a temperature of 70 degrees C. for two hours. This precaution was taken to avoid the danger of infection. After heating, an excess of chemically pure sodium chloride was added and the resulting mixture thoroughly triturated for a half hour, the small amount of salt solution previously added, materially aiding in this process. Following this, distilled water was added to the 15.0 cc. mark on the centrifuge tube and the mixture centrifuged for a half hour at a moderate rate of speed. The large amount of sodium chloride added renders the solution present a saturated salt solution and the supernatant fluid can be decanted off and diluted up to isotonicity.

This antigen was found to give as good results as that used by Miller and Zinnser and the tests tabulated below have been carried out with it. It will often not inhibit hemolysis in doses up to 2 cc. For the tests carried out by us from 0.1 to 0.4 cc. were employed.

The number of sera examined total 601. They comprise blood sera obtained from known tubercular patients under treatment, sera received at the laboratory for routine Wassermann tests, sera from tubercular suspects, sera obtained from blood taken from apparently healthy individuals and those suffering from a variety of different diseases.

The first series consists of a total of 126 cases of confirmed pulmonary tuberculosis, the blood sera being derived from patients in sanatoria or hospitals for tuberculosis. A large number of these cases had Tubercle Bacilli in their sputum. Of these 126 cases, 89 gave definitely positive reactions, 26 negative and 11 doubtful reactions.

TABLE I.

	Total	Positive	Negative	Doubtful
Confirmed Pulmonary Tuberculosis..	126	89	26	11
Suspected Pulmonary Tuberculosis..	61	55	3	3
Suspected Tuberculosis other than Pulmonary	41			
(a) Suspected Glandular Tuberculosis	11	4	5	2
(b) Suspected Tuberculosis of the kidney	8	4	2	2
(c) Suspected Tubercular Epidydimitis	5	2	3	
(d) Suspected Eye Cases	17	7	8	2
(e) Suspected Ear Cases	1	1		
(f) Suspected Intestinal Tuberculosis	1	0	1	

TABLE II.

	Total	Positive	Negative	Doubtful
Ozena Cases	19	9	10	
Ascites Cases	3	3		
Bronchial Asthma	2	2		
Chlorosis	4	2	2	
Pernicious Anemia	2	2		
Coccidiodies	2	0	2	

TABLE III.

	Total	Positive	Negative	Doubtful
Ostensible Normal Cases	51	12	38	
Spinal Fluids	13	0	13	
Positive Wassermanns	60	17	43	
Negative Wassermanns	57	57	0	
Cases giving positive Von Pirquet reactions	13	10	3	
Cases giving negative Von Pirquet reactions	7	0	7	

Of the confirmed cases which reacted negatively we were able to follow up 13 of these, 9 of which died within one month after the tests had been carried out. (Table I.)

The second series consists of 61 cases of suspected pulmonary tuberculosis, of whom 40 were later confirmed. We found that 34 of these gave positive fixations, 3 negative and 3 doubtful. Of the 3 negatives one had been exposed to tuberculosis, the second had an advanced pulmonary lesion with cavities, and the third had an apical lesion with positive sputum. (Table I.)

Series three consists of cases of suspected tuberculosis, other than pulmonary. Forty-one of these are tabulated with results in table I.

The fourth series was carried out with the blood sera taken from 32 patients suffering from diseases other than tuberculosis. All of the Ozena cases had been treated previously with vaccines prepared from polyvalent strains of the Perez Bacillus and it is of interest that a large percentage of those who gave a positive tubercular fixation showed very little improvement under vaccine therapy. The three cases of Ascites which reacted positively proved to be Cirrhosis of the Liver, Tubercular Peritonitis and Chronic Peritonitis with marked emaciation.

Two patients with symptoms of Bronchial Asthma gave strongly positive reactions. Two cases of chlorosis and two of pernicious anemia gave strongly positive fixations, while two cases of coccidiodes and one of measles reacted negatively. (See Table II.)

The last series carried out consisted of ostensibly normal sera, spinal fluids, and sera from positive and negative Wassermann cases. (Table III.)

We regret that owing to our inability to obtain Trypsin of a reliable make, we were unable to carry out antitryptic determinations. In a discussion of immunity in tuberculosis and the relationship that complement fixing bodies bear to this, a comparison of the antitryptic index with the strength of complement fixation should surely be of some value. Jobling's work has clearly demonstrated the relationship between antitryptic effect of the unsaturated fatty acids of the Tubercle Bacillus and the failure of the body to prevent caseation or to digest this material. It has also been observed by other investigators that the pancreatic ferments normally present in the feces are diminished in cases of active tuberculosis.

In addition, we have also observed that the leucocytes are increased in cases where the complement fixing bodies are strongly in evidence. Here too the increase in lipase ferments inherent in the lymphocytes and the protease ferments inherent in the leucocytes surely play a not important role in the immune processes of the body towards this disease. The fact that tuberculin stimulates the production of leucocytes and the favorable effects reported by Manwaring, Opie and others in the treatment of tuberculous meningitis and other tuberculous lesions help to confirm the supposition.

In conclusion, it is evident from the above findings that the complement fixation test is of great value in the differential diagnosis of tuberculous disease processes from simulating affections, and is as such a valuable adjunct to clinical methods of diagnosis. It has its limitations, however, which only increased familiarity with the test will definitely define, and in the case of the Wassermann reaction will depend to a great extent on the anatomic location of the disease process, although here we are dealing with a definitely specific test. Its value as to prognosis is suggested by the above findings, although in no way conclusively proved, and when repeatedly negative in advanced or rapidly progressive cases would indicate a complete absence of immune bodies suggesting a rapidly fatal outcome.

Regarding its value as to the activity of a process we have not been able to confirm the findings of Miller and Zinnser, nor those of Craig, unless

we are to consider every case giving a positive reaction, a potential active case of tuberculosis, when we must assume that the harboring of a live Tubercle Bacillus anywhere in the body means a condition of potential activity, an attitude that we have consistently assumed with regard to the Spirocheta Pallida. In that event our classification of the disease must be based on the presence of a live bacillus in the tissue of the body, and individuals be considered either uninfected or disinfected (both bacteriologically equivalent), progressive or latent. While this would impose an enormous task in the combat against tuberculosis, it would undoubtedly help more to stamp out this plague than our hitherto accepted classification with its false sense of security.

Bibliography.

1. Datta: Policlinico, Rome. July, 1916. (Abstr. J. A. M. A., No. 67, page 644 (63)).
2. Krause: Jour. Med. Research, Sept., 1916.
3. Smith, Theobald; Jour. Am. Med. Assn., Vol. 68, page 669.
4. Bordet & Gengou: Compt. rend. Soc. de biol.
5. Widal & Lesourd: Edinburgh Med. Jour. 1913, X. P., 81.
6. Wassermann & Bruck: Deutsch. Med. Wchnschr. 1906. XXXII, 449.
7. Bergel: Centralbl. f. Bakteriol. Abstr. from.
8. Much: Munchen. Med. Wchnschr. 1912, LIX, p. 685.
9. Besredka: Ztschr. f. Immunit. 1914.
10. Bronfenbrenner: Arch. Int. Med. 1914. VI, 786. Ztsch. f. Immunit. 1914. XXIII, 2, 21.
11. Kuss, Leredde & Rubinstein: Compt. rend. Soc. de biol. 1914. LXXXVI, p. 244.
12. Lalmette & Massol: Compt. rend. Soc. de biol. 1912. LXXIII, p. 120.
13. Stimson: Bull. Hyg. Lab., U. S. P. H. and M. H. S., No. 101, August, 1915.
14. Dudgeon, Mcek & Weir: Jour. Hyg., Cambridge. 1914. I, p. 72.
15. Hirshfelder: Interstate Med. Jour.
16. Caulfield & Beatty: Jour. Med. Research. 1911. XXIV, p. 122.
17. Fraser: Ztschr. f. Immunit. 1914. XX, p. 291.
18. McIntosh & Fildes: Lancet, London. 1914. II, 8, 485.
19. Milleo: Jour. Lab. and Clin, Med. I; p. 816.
20. Radcliffe: Jour. of Hyg. July, 1915. p. 36.
21. Corper: Jour. Inf. Diseases. 1912. II, p. 288.
22. Debains and Japille: Compt. rend. Soc. de biol. 1914. LXXVI, p. 199.
23. Craig: Am. Jour. Med. Sc. 1915. CL, p. 781.
24. Miller & Zinnser: Transactions of the N. Y. Path. Soc., Feb. 9, 1916.
25. Petroff: Jour. Lab. and Clin. Med. I; p. 818 (abstr. from Miller).
26. Webb: Jour. Lab. and Clin. Med. Feb., 1917.
27. Delepine: Annales de l'Institut Pasteur. 1916.
28. Laird: Jour. Med. Research. 1912. XXVII; p. 162.
29. Wills: Centralbl. f. Bakteriol, I; Orig. 1911. Vol. 61, p. 37.
30. Thwort: Centralbl. f. Bakteriol. I; Orig. 1912, Vol. 66, p. 316.

THE DIFFERENTIATION OF SYPHILITIC AND TUBERCULOUS PULMONARY LESIONS.*

By WALTER C. KLOTZ, M. D., Los Angeles.
(From the Barlow Sanatorium.)

As congenital pulmonary lues or so-called "White Pneumonia" is usually fatal in infancy or during foetal life, we may confine our discussion to the acquired forms of pulmonary lues. This condition is regarded as rare by most authors. Thus Fowler [1] was able to find only ten authenticated specimens in the London pathological museums. Only twelve were reported out of 2500 autopsies at the Johns Hopkins Hospital (Osler [2]), while not one was found among 13,000 specimens inthe Army Medical Museum as noted by Clayton.[3]

The number of clinical cases reported in medical literature is relatively greater, but as a positive diagnosis during life is by no means easy, even with the aid of modern diagnostic methods, it is possible that in some of the cases reported as lues of the lungs the diagnosis may have been incorrect. On the other hand it is equally possible that many actual cases of pulmonary lues may have been overlooked or mistaken for tuberculosis.

The diagnosis is rendered difficult by the fact that we may have any of the following conditions present: Tuberculosis of the lungs coexisting with either luetic infection or luetic lesions elsewhere in the body; syphilis of the lungs without tuberculosis present; or finally pulmonary lesions caused by both lues and tuberculosis. In other words, granted that in a given case we have evidence of luetic infection as shown by a definite history of syphilitic infection or by the presence of luetic lesions elsewhere in the body, it still remains necessary to determine whether existing changes in the lungs are due to lues, to tuberculosis, or to both lues and tuberculosis. It is only rarely that we are able to fulfill the postulates laid down by Fowler,[4] namely: (a) A complete history and necropsy finding; (b) Evidence of luetic infection; (c) Repeated negative sputum examinations; (d) Presence of luetic lesions elsewhere in the body.

It is hardly necessary to refer here to the principal differential features laid down in standard text books, namely: the gradual onset and slow course in lues as contrasted with tuberculosis, also the fact that in lues the lesions are usually located at the roots of the lungs or at the base; that stenosis of bronchi and trachea and the formation of bronchiectases are more common in lues, while in tuberculosis there is greater tendency for necrosis and cavity formation. The clinical symptoms may be very misleading.

If we are to accept the diagnosis of a number of authors we may find in pulmonary lues a train of symptoms identical with those occurring in pulmonary tuberculosis, namely: cough and expectoration, fever, night sweats, hemoptysis and gastric disturbances. Nor are luetic lesions always limited to the hilus region or to the base of the lungs. Thus in all five of the cases reported by Landis and Lewis,[5] the diagnosis of tuberculosis had been made and the patients had for a time been treated at tuberculosis sanatoria or health resorts. The same was true in Burnham's case [6] and in both of Brown's cases.[7]

For the reason that modern diagnostic methods had not been perfected at that time, the earlier cases reported in literature, those of Collier, 1882, Hiller, 1884, and Conner, referred to by Roussel,[8] have been left out of consideration. As a basis for this inquiry, however, 31 case histories, reported and published during the last four years, have been studied carefully and the results tabulated. These are the cases reported by the following authors: One each by Culver,[9] Clayton,[10] Roussel,[11] Hays,[12] Hoffman,[13] Lindvall,[14] Blinder,[15] Eastman,[16] Burnham,[17] Gullbring,[18] two each by Brown,[19] and Bauch,[20] five by Landis and Lewis,[21] and seven by Wood.[22]

The 31 cases include also three from our material at the Barlow Sanatorium, not reported or

* Read before the California State Medical Society at Coronado, April 17, 1917.

published previously. The histories of these three cases were as follows:

No. 673.—A woman married, aged 39, gave a history of tuberculosis in both parents. She had typhoid fever ten years ago, pneumonia eight years ago, pelvic cellulitis and pertonitis ten years ago. There was no history of luetic infection in patient or her husband. She had had some pleurisy on the right side and for eight months before admission suffered from severe colds, with sore throat, irritating cough and some expectoration. There was slight dyspnea, occasional hoarseness, slight fever, night sweats, poor appetite and gastric distress. She had lost sixteen pounds in weight. The tonsils had been removed six months before admission. Ulceration of the throat developed a week or so later. As a child, had enlarged glands of the neck, which had been dissected.

Examination of the chest showed dullness, with bronchovesicular breathing, increased voice and a few fine moist rales over both upper lobes. There was also some dullness with fine rales in the right axilla.

Examination of the throat was made by Doctor Hill Hastings one week before admission, who reported as follows: "Pharyngeal wall shows macerated superficial ulceration, especially marked on lateral walls and extending up into the nasopharynx. The surface is pale red, with infiltration of the mucosa. Tonsillar fossa shows healthy healed scars. There is slight ulceration around the Eustachian tubes, also a shallow ulcer on roof of pharynx. The larynx is negative."

Examination of other organs, including blood and urine was negative. Repeated examination of sputum and the secretion from ulcers was negative for tubercle bacilli. Wassermann test made one week after admission, four plus.

On specific treatment and local antisepsis, the pharyngeal ulcer began to heal. Mixed treatment was instituted one month after admission and was followed by complete healing of the ulcer and marked improvement in general condition. The patient gained eleven pounds and has maintained good health for two years since discharge.

Case 710.—A woman, age 36 years, widowed, gave a family history of tuberculosis. There was one still birth, one miscarriage and she had one living child ten years old who was delicate and had snuffles. At birth the child had an eruption and developed ulcers on the legs.

For three years the patient had been getting more and more tired and languid and had lost thirteen pounds in weight. She had had some cough for six months with scanty expectoration. There had been no hemoptysis. She complained of considerable dyspnea, hoarseness and pain in side and back of chest. Had had some night sweats. The appetite was good and digestion unimpaired. Two years ago had an obstruction of the nose due to some growth. An operation for this condition (Gumma?) was followed by loss of septum. No history of any ulceration on mucous membrane of mouth or throat.

Examination of chest. There was dullness with broncho-vesicular breathing, increased vocal resonance and fine moist rales over both upper lobes as far as the third rib and the spine of the scapula. Above the clavicle on the left side there was a small area of bronchial breathing and voice.

Examination of nose showed absence of septum. The mucous membrane was congested and bled easily. Examination of larynx negative.

Examination of other organs, including blood and urine was negative. Repeated sputum examinations were negative for tubercle bacilli. Wassermann examination made two months after admission was four plus.

The temperature up to this time had been typical of tuberculosis, daily subnormal remission and evening elevation to 100. The pulse range was 80-106.

The patient subsequently developed headache, dizziness, pain in back of neck, nausea and vomiting. Some stiffness of neck muscles, exaggerated knee jerks and some inequality of pupil. Kernig and Babinski phenomenon absent.

She was transferred to the County Hospital and unfortunately lost to further observation.

Case 755.—A man, 36 years old, married, gave a history of tuberculosis in the family and had been associated with an individual suffering with tuberculosis for four years. He gave a history of luetic infection in India ten years ago. For three years has been "run down" and suffered from intermittent cough, hoarseness, little or no sputum, some pain in chest, with loss of appetite, gastric disturbances, insomnia and headaches. Had an attack of iritis one year ago and orchitis three years ago.

Examination of chest: Dullness on both sides, more marked on left with roughened bronchovesicular breathing and increased vocal resonance, but no rales. Signs were heard as far as the third rib in front and the spine of scapula behind. There were no signs at the base.

Examination of nose showed perforation of septum. Examination of other organs, including blood and urine, was negative. Repeated sputum examinations were negative for tubercle bacilli. Wassermann four plus.

Patient was discharged before treatment was begun and unfortunately lost to further observation.

The two following case histories are introduced for the purpose of illustrating the clinical features in the presence of both lues and pulmonary tuberculosis, cases in which a positive sputum examination furnished a basis for differential diagnosis:

Case 862.—A man thirty years of age, railroad employee, gave a negative family history. No other illness, but admitted a Neisser infection eight years ago. Denied Lues. He had a cough and expectoration for six months, but no hemoptysis. There was some dyspnea, a little hoarseness, no pleurisy, no chills and no fever. There had been no night sweats. The appetite was good, the digestion unimpaired. There was some impairment of strength. He had lost ten pounds in weight. The general appearance was pale and spare.

Examination of chest showed dullness, bronchovesicular breathing and increased vocal resonance over both upper lobes as far as the second ribs in front and the spine of the scapula behind. A few fine moist rales were heard on both sides and some pleuritic friction rales at the left base.

Examination of nose and throat showed congestion of pharynx extending to soft palate and uvula. Examination of larynx unsatisfactory. Teeth in poor condition. Pyorrhea present.

Temperature during residence occasionally 99, or 99.2, pulse range 65-90. Sputum examination showed typical tubercle bacilli present on direct examination. Other organs, including blood and urine, negative.

About one month after admission developed an ulcer of the tongue. Wassermann examination was four plus.

Patient was discharged before treatment, but it was reported subsequently that the ulcer on the tongue had healed promptly under specific treatment.

Case 831.—Man, mechanician by occupation, 21 years old, single, gave a history of tuberculosis in brothers and sisters and had been exposed to infection at home. Habits good. Denied venereal infection.

For about one year had had cough with some expectoration. The sputum was not examined before admission. Had had several hemoptyses. There was dyspnea on exertion and some pain in the chest. He did not complain of hoarseness, and had had no chills, though there was some fever

SUMMARY OF FINDINGS IN CASES REPORTED.

Author	No. of Cases	Lues Infect. History	Luetic Lesions Other Organs	Location of Pulmonary Lesions	Wassermann Test	T. B. Sputum	Remarks
Culver	1	+	+	Apices	+	0	Resolved
Clayton	1	+	+	Scattered	+	0	Necropsy
Roussel	1	+	+	Scattered	+	0	Resolved
Hays	1	0	0	Base	+	0	Untreated
Hoffman	1	+	+	Apices	+	0	Resolved
Lindvall	1	(?)	—	Hilus	+	0	Resolved
Blinder	1	+	+	Apex and Hilus	+	0	Resolved
Bauch	2	+	0	Hilus	+	0	Compl. Fix. Tbc.
Easton	1	+	0	Base	+	0	
Burnham	1	+	+	Apex and Base	+	0	Resolved
Wood	7	+	0	Apex and Base	+	0	Resolved
Landis and Lewis	5	+	0	Apices	+	0	Resolved
Gulbring	1	+	+		+	0	Necropsy
Downing	2	—	—	Apices	—	0	Resolved
Brown	2	+ (1)	+ (1)	Scattered	+ (1:?)	0	(1) Resolved Necropsy, (1) Aneurism Aorta
Klots	3	+ (1)	+ (2)	Apices (2), Base (1)	+	0	
Total	31	+ (24)	+ (10)	Apices (22)	+(30)	0(31)	

and night sweats at the time of the hemoptyses. His appetite was good, the digestion unimpaired, but he had lost some strength and about eighteen pounds in weight.

Examination of chest: There was dullness with bronchovesicular breathing and increased vocal resonance over both upper lobes as far as the second ribs in front and the fourth dorsal vertebra behind. Fine moist rales heard over right side as far as base in front and the angle of the scapula behind. On the left side a few crackling pleuritic rales in the axilla.

Sputum examination showed typical tubercle bacilli on direct examination. Examination of other organs, including blood and urine, was negative. The temperature on admission was normal and the pulse range 85-110.

About two weeks after admission developed genital ulcers. These were at first mistaken for herpetic vesicles. But subsequently they coalesced and developed into a dirty, punched out ulcer, with some induration. The glands in the left inguinal region became enlarged, slightly tender and matted together.

Microscopic examination of preparation from ulcer made by Dr. Walter Brem was positive for Spirocheta Pallida.

Wassermann test suspicious.

Patient referred elsewhere for treatment and lost to observation.

The accompanying tabulation gives a summary of the different cases reported. Thus we find that only three fulfilled Fowler's postulates. There was, however, a definite history of luetic infection in all but seven, and in one the history of infection was doubtful. The apices or upper lobes alone were involved in eleven, while in thirteen the lesions were located not only at the tops of the lungs but also at the base or hilus region. In only six were the lesions limited to the base or hilus. This distribution of lesions would therefore be contrary to the generally accepted statements in text books.

The Wassermann test was positive in all of the thirty cases in which it was employed. In one case no statement is made in regard to the Wassermann.

Sputum examinations were negative for tubercle bacilli in every one of the cases. Four observers had employed the antiformin method in addition to the direct method. Three had made animal inoculations with sputum, and one observer reports twenty-four successive examinations. One used the complement fixation test. All the above tests were negative for tuberculosis. Three observers reported the results of X-ray examinations.

In twenty-two cases the clinical symptoms and local symptoms cleared up under some form of specific treatment. Three died, while three were not observed after treatment or were not treated. In one case there was no change in condition, and in one other no statement was made as to treatment.

The important clinical features derived from the study of these cases is the fact that every one of them showed symptoms characteristic of pulmonary tuberculosis; the symptom complex present including cough, expectoration, hemoptysis, emaciation, fever, night sweats and gastric disturbances. In all a diagnosis of tuberculosis had been made originally, to be modified or altered later. A number of the patients had been admitted and had been under observation or treatment at tuberculosis institutions or resorts before a diagnosis of lues had been made. The physical signs in the chest as described were almost identical with those of pulmonary tuberculosis. In addition to changes of resonance and breath sounds, such as dullness, impaired resonance, bronchovesicular breathing or bronchial breathing, moist rales or other adventitious sounds were reported in most instances. When it is recalled how difficult it may be for the pathologist to distinguish luetic and tuberculous lesions by anatomical or even histological examination; it can be readily understood that their differentiation during life by clinical methods may be puzzling or difficult. It is necessary to be somewhat guarded, therefore, in accepting a diagnosis in the absence of definite bacteriologic or biologic proof. Nor can we accept as competent evidence necessarily the results of negative sputum examinations. The inconclusiveness of sptum examinations has been pointed out by Cunningham,[23] and has been repeatedly emphasized. The medical reports of numerous tuberculosis sanatoriums show that on an average in only about 50 per cent. of the cases are tubercle bacilli found in the sputum at any time.

Ten of the cases showed luetic lesions elsewhere in the body, but this occurrence is not necessarily a proof that existing lesions in the lung were also luetic. Tuberculosis and lues may be and very frequently are associated. We know that a pre-

vious or recent luetic infection may either predispose to tuberculosis or cause a latent tuberculous process to light up or become active. For that reason it cannot be accepted as a definite proof that in fifteen cases the symptoms and physical signs in the lungs cleared up promptly under specific antiluetic treatment. It may be properly urged that the effect of such treatment in improving the general condition and resistance of the body may indirectly exert a favorable influence upon the tuberculous process.

It is quite usual to find in cases of chronic pulmonary tuberculosis alternating periods of quiescence and activity, such exacerbations being brought about by intercurrent infections or unfavorable circumstances. The possible association of lues and tuberculosis must therefore be kept in mind constantly, bearing as it does on the question of treatment. It is generally accepted that by treating the luetic condition we may accelerate improvement or arrest of a tuberculous infection. Antiluetic treatment would be indicated therefore even if the pulmonary lesions were tuberculous and not luetic. In this connection, however, some warning notes have been sounded as to the danger of causing focal reactions in the lungs by the administration of salvarsan and neosalvarsan. Attention has been called to this question recently by Potter,[24] who recommends their use, however, in latent incipient or chronic fibroid pulmonary tuberculosis.

Recapitulating our present knowledge as to the differentiation of pulmonary lues and tuberculosis, it would appear that a diagnosis must be made cautiously and not until all diagnostic methods at our disposal have been exhausted. The following procedures would suggest themselves: Repeated sputum examinations both by the direct and antiformin methods; cultures with Petroff's medium or some similar method of direct planting; animal inoculation and routine Wassermann tests in all cases with negative sputum examination, where definite lung signs are present. A reliable method of complement fixation for tuberculosis would be of considerable value in this connection, as obviously none of the tuberculin tests possess any practical clinical value. X-ray examinations and fluoroscopy may also throw much valuable light as to conditions present in the chest. Wood[25] recommends that in addition to X-ray examinations of the chest, radiographs be made of the long bones, in cases where lues is suspected. Needless to say a painstaking history and careful general physical examination should always precede the above special examinations.

SUMMARY.

Summing up the results of this clinical study we find that in thirty-one cases reported as pulmonary lues there were present symptoms and physical signs generally accepted as characteristic of pulmonary tuberculosis, and that in the majority of these cases a diagnosis of pulmonary tuberculosis had been made and that many of the patients had been treated as such. A subsequent diagnosis of pulmonary lues had been made only after the usual and accepted methods of diagnosis had been employed and additional facts obtained by careful histories and more thorough examinations. The experience and reputation of many of the authors reporting these cases would in itself assure us of the correctness of the diagnosis as reported. At the same time certain sources of error have been pointed out and conceded, while possible objections have been anticipated.

At a time when many are beginning to recognize certain limitations and sources of error in the diagnosis of pulmonary tuberculosis, it may be well to recall other conditions that may bring about pulmonary changes. We certainly may err in making a diagnosis of tuberculosis on insufficient grounds and in so doing subject our patient to considerable loss, annoyance and worry. The clinical, social and economic significance of such errors is too obvious to require further discussion.

References to Literature.

1. Fowler & Godlee, Diseases of the Lungs, London, 1898, p. 429.
2. Osler, Practice of Medicine, New York, 1912, p. 272.
3. Clayton Am. J. Med. Sci., 1905, April, p. 563.
4. Fowler, loc. cit.
5. Landis & Lewis, Am. J. Med. Sci., 1915, No. 2, p. 195.
6. Burnham, Bost. Med. & Surg. J., 1914, Sept. 10, p. 411.
7. Brown, Bull. Johns Hop. Hosp., 1914, April, p. 112.
8. Roussel, loc. cit.
9. Culver, J. A. M. A., 1915, Jan. 23, p. 335.
10. Clayton, loc. cit.
11. Roussel, loc. cit.
12. Hays, Laryngoscope, 1916, No. 3, p. 153.
13. Hoffman, Kentucky Med. Jour., 1915, No. 5.
14. Lindvall, Hygeia (Stockholm), 1915, No. 8, p. 1025.
15. Blinder, Med. Rec., 1914, Aug. 22, p. 330.
16. Easton, Med. Rec., 1915, LXXXVIII, p. 652.
17. Burnham, loc. cit.
18. Gullbring, Hygeia (Stockholm), 1916, No. 5, p. 289.
19. Brown, loc. cit.
20. Bauch, Med Rec., 1916, May 20, p. 906.
21. Landis & Lewis, loc. cit.
22. Wood, Bost. Med. & Surg. J., 1916, Nov. 9, p. 677.
23. Cunningham, Cal. State J. Med. ———
24. Potter, Am. J. Med Sci., 1916, No. 6, p. 823.
25. Wood, loc. cit.

METABOLISM AND DISEASE.*

LORENA M. BREED, M. D., Pasadena, Calif.

The charge has been made in the past that medicine has not kept pace with surgery. This charge, unfortunately, cannot be denied, and the reason, we are forced to admit, has been in part at least, due to the slow growth in physiology. At the present time, however, the pendulum is swinging the other way. Not only are physiologists producing satisfactory solutions to many heretofore unsolved problems, but clinicians are more interested in acquainting themselves with these results, and there are more means of bridging the way from the clinic to the research laboratory, which, in many places, is now considered a necessary adjunct to the hospital. The illuminating work being done at the present time, on organ functions, ductless glands, blood chemistry, serum ferments, metabolism and nutrition, all point unmistakably to the fact that physiology is coming into its own. The body is recognized not only as an anatomical structure, but more as a living structure, with various closely related interdependent normals, the physiological actions of which are bio-chemical, and the life of the organism depends upon the ever-changing activity of its cells which are never in a state of equilibrium. The supply which the blood is constantly

* Read before the Forty-sixth Annual Meeting of the Medical Society of the State of California, April, 1917.

bringing for the upbuilding of the cells is derived from the food, but what constitutes a food, is becoming a more important question with the development of our knowledge of metabolism and nutrition. As the body cells are largely protein, adequate calories should include a certain amount of proteins as well as carbohydrates and fats, together with a recognition of the unlike values of protein. There must be also, a recognition of the need of food hormones (vitamins), which play an important role in nutrition, entirely independent of any energy which they may yield. It is impossible as yet to isolate vitamins directly from all foods, but Voegtlin [7] has found that they run parallel in grains with phosphorus, and that grains containing less than 0.4% of phosphorus are deficient in vitamins. McCallom, Simons and Pitz [2] find two dietary essentials for growth which they call fat soluble "A" found in butter and cream, and water soluble "B" found in a variety of foods.

The body requirements vary according to age and bodily activity and the intensity of the life processes. The work done may be internal, as digestion, respiration, circulation and muscular-tension, or external, as any body activity.

Since the efficiency of the human machine depends upon its power (energy production) and repair, and this in turn upon the quantity and quality of the food taken, it is obviously important that the question of foods and body metabolism should receive more attention. The energy value of foods has been accurately determined by burning in a calorimeter under such conditions that all the heat evolved is taken up by water surrounding the calorimeter and the temperature of the water measured by a delicate thermometer. Combustion of foods in the human body may be also measured, by the heat eliminated from an individual together with the respiratory quotient. If food is taken, 10% of the basal heat production is added, and beyond this the total body requirement depends upon the amount of bodily exercise. As the body metabolism may be accurately measured in a human calorimeter (direct calorimetry), and the amount of energy liberated in the process of oxidation of a given amount of foodstuff may be computed with accuracy (indirect calorimetry) and since [7] these two computations have been found to agree within a few figures, therefore, knowing the chemical composition of foods, the body requirements may be accurately and easily estimated. The energy liberated from the oxidation of foods in the body constitutes the basis of life, and the heat eliminated is the measure of the sum-total of its activities and life processes. In the growing child the life processes are more intense and the activity greater than in the adult or the aged and he requires more building material, and more energy producing foods.

Haldane [4] says that the body organism as shown by its structure, activity and life history tends unmistakably to maintain a normal, and he has shown that the physiology of breathing is one of the regulatory interdependent normals which has a direct bearing upon body metabolism. In the process of metabolism oxygen is consumed and CO_2 is given off, and the breathing is regulated to correspond with this consumption and production. The CO_2 which normally preserves a tension of 5% to 6% in the blood and alveolar air reaches the respiration center stimulating it to action. The impulses pass along the vagus nerves which exercise a regulatory influence on the discharge from the respiratory center preventing undue or useless prolongation of the inspiratory effort. During heavy muscular exercise, or after temporary embarrassment to respiration, the breathing is increased but the depth adjusts itself to keep the normal percentage steady. In his experimental work, Haldane has shown that the tension of CO_2 depends (1) upon the H ion concentration; (2) the reaction of the respiratory center to this concentration, and (3) to the capacity of the blood for carrying CO_2. This capacity of the blood for carrying CO_2 Marriot [10] has shown depends upon the alkali reserve. The blood is the seat of the acid-base regulatory action and maintains an efficient alkali reserve which keeps the plasma at a constant, slightly alkaline reaction. Acid products of metabolism, chief of which is CO_2, are constantly being poured into the blood. The slightest change toward acidity stimulates the respiratory center, which reacts by increased breathing and the consequent removal of the excess of acid. Even with an excess of CO_2 in the tissues the respiratory mechanism responds, oxidation is increased, and the removal is accomplished without depletion of the alkali reserve. There are, however, other acid products of metabolism such as sulphuric, phosphoric and oxybutyric acids which are non-volatile. As they are poured into the blood they neutralize a corresponding amount of the alkali-reserve and the reaction shifts toward acidity. The respiratory mechanism makes an effort to compensate, which results in an over stimulation, and a diminished CO_2 tension in both blood and alveolar air. This lowered tension, or a lowered alkalinity of the plasma indicates a corresponding increase of non-volatile acids in the blood, either of which may be considered an index to the H ion concentration. Underlying the condition known as acidosis is first, a diminution in the alkali reserve. This may be due to an impoverishment of the body in bases, caused either by a diet poor in substances which give rise to bases, a faulty absorption, or an increased loss of bases, or by abnormal amounts of acid produced in metabolism during an excessive intake of proteins. Peabody [13] and his associates proved conclusively that a severe acidosis could be produced by a strictly protein diet.

Although the digestive system is of paramount importance in normal metabolism it is probably the most neglected. The quantity and quality of the food is often ignored or left to a capricious or gluttonous appetite.

Gastric motility depends largely upon the nature of the food ingested. Normally, carbohydrates produce a gastric juice rich in digestive power, and pass through the stomach rapidly. Proteins produce a rich juice but move less rapidly, while a diet very rich in fat hinders the passage of food because of a very much lessened gastric juice. In order to produce conditions favorable for the

normal opening of the pylorus, the gastric contents should be acid and the duodenal contents should be alkaline. If the pancreatic juice is not activated, protein digestion suffers and partially split products of protein metabolism are absorbed directly into the blood stream from the intestinal tract. If bile is not present in sufficient amounts the utilization of fats is hindered or reduced. Thus the external secretion of the pancreas is the direct result of the internal secretion of the duodenal mucous membrane. Therefore with a lack of pancreatic secretion, with all the attendant sequellæ, we must look for the source of the trouble in the gastric juice, the duodenal membrane or in the quality of the food taken. Under normal conditions it is obviously due to the quality of the foods. Kramer [7] suggests that the internal and external functions of the pancreas may be closely akin, in that the external provides for the complete neutralization of the acid contents from the stomach, thereby protecting the liver in its glycogenic functions, while the internal preserves the proper H ion concentration in the tissues. Murlin and Sweet [8] think it possible that the pancreatic hormone may prove to be a peculiarly adapted alkali produced by the Islands of Langerhans. A differentiation of the cells in the pancreas for the production of an alkali is, they think, no more improbable than such a differentiation for the production of acid in the stomach. The primary defect in diabetes is an inability to oxidize glucose, as proved by the low respiratory quotient and the elimination of sugar in the urine when ingested. But beyond all this there is a profound disturbance of metabolism. Not only is sugar excreted in the urine, but the threshold of sugar in the blood is raised, and the acid-base balance is disturbed. The ability of the alkalis to facilitate a primary cleavage of glucose in the blood seems conclusively established, and the relation of alkalosis to hypo-glycemia emphasizes the significance of the acid-base equilibrium in the regulation of blood-sugar content. On fasting and low diet diabetics show gradually increasing power to oxidize carbohydrates, first from their own body proteins and later from a carefully regulater diet—even when the dextrose-nitrogen ratio indicates a total diabetes. The possibility of rapid changes in this ratio is considered by Allen and DuBois [9] to be one of the strongest evidences in favor of the functional element of diabetes, and the fact that the functional power recovers, in most cases, with proper dietary measures, points to a faulty metabolism as the probable primary cause.

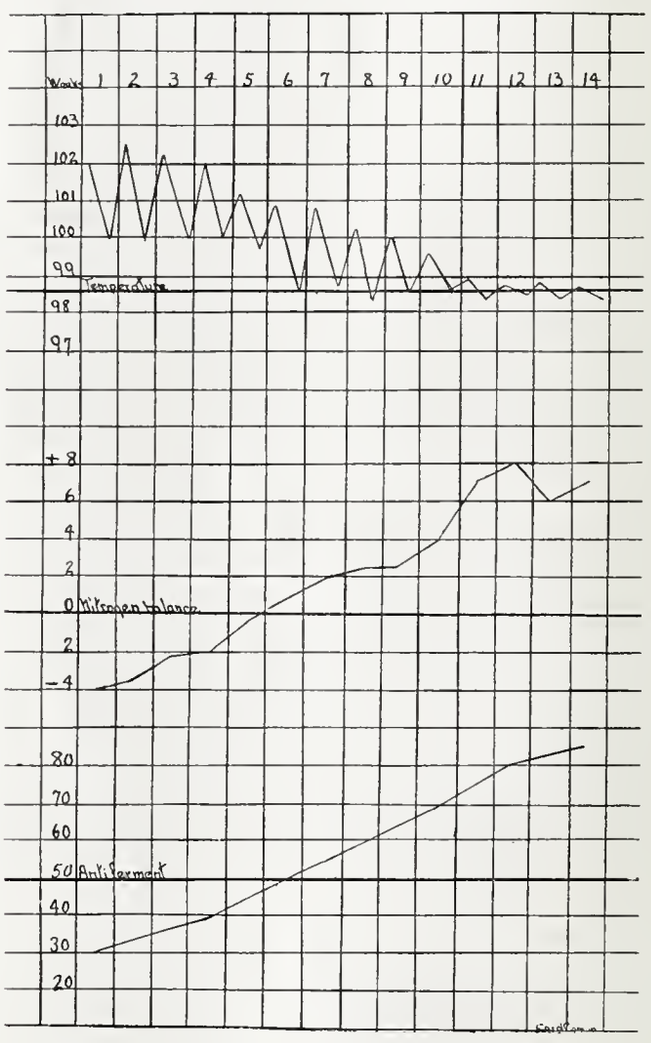
In normal metabolism proteins are completely dismembered within the intestinal tract and oxidized down to amino-acids which are non-poisonous. If the diet contains more nitrogenous material than is needed by the organism, a part of the amino-acids are changed within the intestinal canal to form ammonia. The remaining soluble products of oxidation are absorbed into the blood-stream from whence they are utilized by the tissue cells, and the waste excreted by the kidneys. If, however, the splitting of protein is imperfectly carried on in the intestinal tract, these imperfect poisonous products are also absorbed into the blood-stream and may cause serious symptoms, from dizziness, nausea and vomiting, to convulsions or even death. Nature, however, always tries to compensate, and when harmful metabolic products are poured into the blood-stream, the regulatory action of the kidneys and respiratory system come into quick action and promptly excrete them, thus showing their ability to maintain the blood at a normal balance. If, however, the excretory stress becomes too great, or too long continued, the excessive excretion of these poisonous products overworks and irritates the kidney and may produce any stage of lowered kidney function. Vaughn [10] believes that most cases of nephritis are due to toxic products of metabolism from imperfect splitting of proteins, absorbed as such, from the intestinal tract. The continued ingestion of proteins under such conditions puts still greater stress upon the kidneys until the function finally breaks. In the acute stages of lowered kidney function, proper regulation of food intake, relieving the kidneys of excretion of all nitrogenous wastes, often results in perfect restoration of function.

It is obviously necessary to know the chemistry of foods and their nutritive value; to estimate correctly the body requirements, and to regulate the intake of foods according to the output of wastes in order to keep the body in nitrogen equilibrium, but it is also necessary to know the exact chemistry of the blood which is a measure of the intermediate metabolism. The tendency of the blood normally is to preserve a balance not only in CO_2 tension but in other constituents as well: total proteids, comprising serum proteids and globulins; total non-proteid nitrogen, comprising uric acid, urea, ammonia, creatin and creatinine, in certain definite proportions. The role of the mineral elements should also be understood in order to grasp the idea of their utility in the body as well as their possibilities for harm. Normally the blood preserves a balance in these elements, the presence of which are needed to preserve the neutrality of the blood, the proper reaction of the digestive juices, and the elasticity and irritability of nerves and muscles. They form certain combinations which protect the body against harmful substances and contribute to one side or the other of the acid-base balance which Henderson [11] has shown is maintained by a chemical and excretory self-adjustment. Physiologically, calcium and magnesium are balanced opposites. An excess of magnesium in the blood causes a counter active elimination of calcium; an excess of calcium salts in the blood increases the globulins, thus rendering the blood more coagulable. This increases the viscosity and renders it more difficult of passage through the capillaries, thus raising arterial tension. To Alice Braithwaite is due much credit for evolving the idea of the deleterious effects of mineral salts upon the circulation and we now have a revision of food classifications which show the mineral as well as the caloric value of foods. In his experimental work on mineral elements in

animal nutrition, Forbes [12] says that in a large and general way life may be regarded as a co-ordinated system of electrical responses to electrical stimulation. The ions are bearers of the electricity and on account of this fact they play a leading role in directing the whole process of body metabolism. In order that there shall be perfect response to stimulation of any part of the body there must be perfect nutrition of the part, and perfect balance of the blood flowing in contact with it.

Another constant found in normal blood is the ferment-anti-ferment balance, which bears an important relation to protein metabolism as well as to body resistance to infections. Jobling and Petersen [22] have shown that the blood contains a non-specific ferment, the activity of which under normal conditions is completely inhibited by the excess of anti-ferment in the serum. Any lowering of the anti-ferment alters the balance of this system, and if the change is sufficient, ferment activity becomes apparent, and may be demonstrated by an increase of non-coagulable nitrogen and by the appearance of primary and secondary proteose in the blood. In their experimental work on the starving rabbit, they found that the rate of nitrogen excretion was almost universally proportional to the level of the anti-ferment index and that the anti-ferment could be raised, thus lessening the rate of protein metabolism by the injection of unsaturated fatty acids or their soaps, and furthermore, that any substance which could saturate the unsaturated fatty acid bonds would lower anti-ferment and increase protein metabolism.[14] Their experiments prove that this anti-ferment is lipoidal in character, that it is composed of unsaturated fatty acids in finely dispersed form, and may be removed by any lipoidal solvent.[15] In their work on iodids two years ago, they showed that the action of iodin in tuberculosis was due to its ability to saturate the unsaturated fatty acids present in caseous foci, which, due to their anti-ferment activity, inhibit autolysis. This, they believe, explains why iodids, which lower anti-ferments, are always associated with an increase in protein metabolism, while phosphorus, egg fats and unsaturated fats, as olive oil and cod liver oil, depress protein metabolism by increasing anti-ferment and lead to a storing of nitrogen apart from any intrinsic food value in themselves. It seems to be an established fact that the anti-ferment of the serum is increased during pregnancy, but declines rapidly after delivery. Wilson [16] of John Hopkins, who has described the metabolism of pregnancy, shows also that there is a positive nitrogen balance during this period, while Stern [17] points out the influence of the increased anti-ferment index upon the tuberculin reaction during pregnancy as contrasted with non-pregnant women, and with the period after delivery. Petersen [18] observes that the relation between anti-ferment titer and the nitrogen balance noticed in the starving rabbit holds good in the pregnant woman and probably for a like reason.

As suggested by the work of Jobling and Petersen,[19] we have during the past year made frequent observations on humans, in whom the rate of protein metabolism was found to be noticeably rapid or slow as shown by their nitrogen balance. In all of these cases we have found the rate of nitrogen excretion to be inversely proportional to the level of the anti-ferment index. In two cases, with a constant negative nitrogen balance,



Patient with Colitis and Malnutrition
Complete estimations were made of intake and output, daily. Chart shows average weekly.

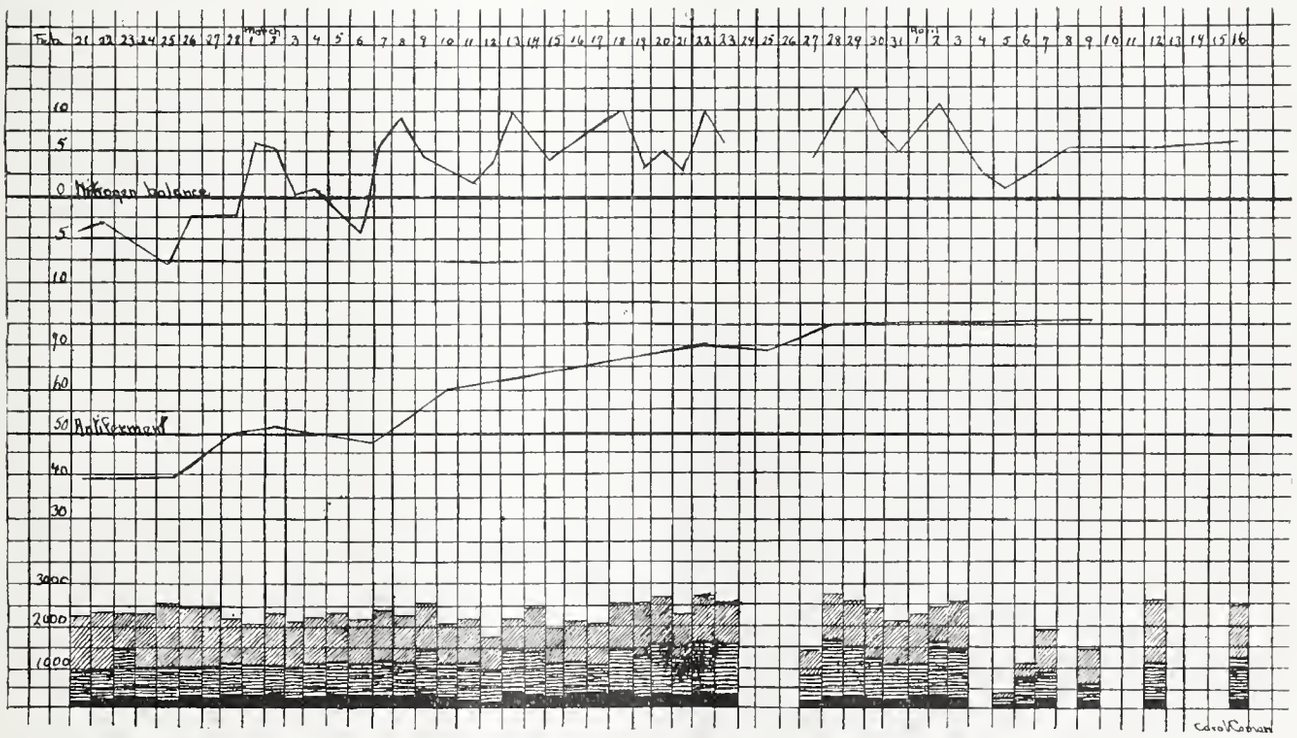
we succeeded in raising the anti-ferment titer and depressing the protein metabolism by feeding alone. The first was a case of malnutrition resulting from a colitis, accompanied by diarrhea, extreme emaciation, painful joints and a daily rise of temperature to 102°. Upon a diet of rice and barley gruel with cream, the colitis disappeared and within a month the stools were normal but the temperature remained unchanged and there was a constant minus nitrogen balance. Foods containing phospho-proteids and unsaturated fats were added to the diet, in gradually increasing amounts. The nitrogen loss became less, equilibrium was soon reached, followed by an increasing positive nitrogen balance. Coincidentally, there was a rise in serum anti-ferment, the tem-

perature became lower and finally normal. As there was no other treatment, this suggests that the temperature and the nitrogen loss were caused by a toxic destruction of proteid due to the disturbed ferment-anti-ferment balance.

The second case was one of hyperthyroidism with the usual rapid heart, moist flushed skin and nervous irritability. DuBois,[22] who has recently studied the metabolism of this condition for the first time in a calorimeter, found that the measurement of the heat production gave the best index of the severity of the disease and the effect of the various treatmnet employed. An increase in the basal metabolism was found with great regularity—in severe cases reaching from 50% to 75% above the normal—a level found in no other condition. He believes that in severe cases the warmth of skin, and sweating can be accounted for entirely by the necessity for the increased elimination of heat produced by the rapid metabolism, and at least a part of the tachycardia is due to the same cause. He thinks it might be possible to reproduce the tachycardia, cardiac enlargement, emaciation and mental irritability, if we were able to stimulate the metabolism of normal men for twenty-four hours a day over a period of months or years. He found that the law of conservation of energy held good in this disease and that there was no disturbance of intermediate metabolism. Our patient was put to bed with the hope of improving her condition and also for observation of her metabolism. On a well-balanced diet containing 2200 to 2300 calories her nitrogen loss reached 7.3 grams per day with no improvement of her clinical symptoms. With the idea of increasing the serum anti-ferment and thus reducing the rate of protein metabolism, we began adding phospho-proteids and unsaturated fats to the diet, taking care to keep the caloric intake and total fats, proteids and carbohydrates at the same figures as before. The result was immediately noticeable on the nitrogen excretion, which gradually decreased until within a week the patient was in a positive nitrogen balance. Coincidentally there was a rise in the anti-ferment index and some improvement in the clinical symptoms.

These cases, while not conclusive, suggest further work on metabolism in infections, malnutrition, and hyperthyroidism.

Still another factor in physiological chemistry awaits our careful investigation. Recent work on the amino-acids points to the possible explanation of many hitherto unexplained problems in metabolism. The defective proteins which are incapable of supporting life or promoting growth are



Patient with Hyperthyroidism
Shaded blocks show daily intake
Calories of Carbohydrates
Calories of Fat
Calories of Proteid
Febuary 25 – Started feeding Phospho-proteins and unsaturated fats
March 5 – Operation on member of family
March 24 – Removal of Adenoma of right lobe.
April 4 – Temporary Edema of Larynx.

found to be lacking in one or more of these amino-acids which are most important in the functioning of the organism. Alsberg [23] has recently shown that physiologically active substances may be formed from amino-acids and that if the main nitrogenous element of the diet is one of the defective proteins there may be an imperfect functioning through failure to supply the raw materials needed by certain glands to elaborate their specific products. The normally functioning thyroid gland contains the iodine compound now believed to be formed from tryptophane. Therefore, if the diet contains no tryptophane, a corresponding disturbance of this gland's function results. This iodine compound of the thyroid is physiologically active and its over-production is a poison. Iodine compounds saturate unsaturated lipoids and lower anti-ferment, increasing protein metabolism; unsaturated fats, and phosphorous nitrogen compounds in foods increase anti-ferments and lessen the rate of protein metabolism which is the most prominent symptom in hyperthyroidism, malnutrition and infections. Adrenalin, also a physiologically active substance, is probably derived from the amino-acid tyrosine and a lack of this substance in the diet indirectly lowers the function of the adrenal glands. The amino-acid histodin is supposed to be the origin of pituitrin which is manufactured by the pituitary gland, and Emerson has recently shown that para-oxyphenypethylamin is formed from tyrosine in the self-digestion of the pancreas.

Agricultural chemists are studying these questions in order to ascertain the best foods on which animals may develop, grow and reproduce. In a recent address before the Washington Academy of Sciences Eugene DuBois [24] says that in the course of years, perhaps the food of sick men may be as scientifically administered as that for animals on a modern farm.

Already these questions are attracting nation-wide attention. The ninth quinquennial Scandinavian Congress, which meets in Copenhagen in August this year, will discuss "The Importance of Dieting in Treatment of Insufficiency of the Heart and Kidneys." The twenty-third annual meeting of German internists convening in Wiesbaden this month have addresses announced on "The Constitution as a Cause of Disease" and "Nutrition in War." Everywhere the consideration of adequate food supplies from an economic standpoint is engaging the attention of experts. We have been called upon to increase production and diminish waste in order to meet actual demands, and it is of vital importance that in so doing we shall understand how best to keep the fuel supply so that the human machine may be kept in proper repair.

Bibliography.

1. Voegtlin, Carl: Journal Washington Academy of Sciences, Oct. 4, 1916. Vol. No. 16.
2. McCollum, Simonds and Pitz: Journal Biologic Chemistry, Nov., 1916.
3. Peabody, Francis: Direct and Indirect Calorimetry (4th paper on Chemical Calorimetry).
4. Haldan, J. S.: Harvey Lectures, New York, Oct. 14, 1916, Science, Nov. 3, 1916.
5. Marriot, W. McK.: Archives Internal Medicine, Sept., 1914, p. 409.
6. Peabody, Higgins and Fitz: Jour. Med. Research, New Series, Vol. xxix, May, 1916.
7. Kramer: Jour. Biol. Chem., Nov., 1916.
8. Murlin and Sweet: Jour. Biol. Chem., Dec., 1916.
9. Allen and DuBois: Arch. Int. Med., 1916, vol. xii, p. 1010-1059.
10. Vaughn, Victor: Jour. A. M. A., Dec., 1916.
11. Henderson, L. P.: Harvey Lectures, 1914-1915. Series x, J. P. Lippincott and Co.
12. Forbes, E. B.: Jour. Wash. Acad. of Sciences, Vol. vi, No. 13, July 19, 1916.
13. Jobling and Petersen: Immunitats Forshung und Experimentelle Therapie, Nov., 1915.
14. Jobling and Petersen: Jour. Experimental Med., Vol. xix, No. 5, 1914.
15. Jobling and Petersen: Arch. Int. Med., April, 1915.
16. Wilson, Carl: Bull. Johns Hopkins Hosp., 1916.
17. Stern, Robert: Zeit. P. Gebart u. Aynck, 1910, 66.
18. Petersen, William: Unpublished paper read before Chicago Path. Society, Feb., 1917.
19. Jobling and Petersen: Immunitats Forshung und Experimentelle Therapie, Nov., 1915.
20. Jobling and Petersen: Jour. Exper. Med., Vol. No. 2, pp. 127-140, 1915.
21. Jobling and Petersen: Jour. Exper. Med., Vol. xx, No. 5, 1914.
20. Jobling and Petersen: Jour. Exper. Med., Vol. xxii, No. 2, pp. 127-140, 1915.
23. Alsberg, Carl: Jour. Wash. Acad. of Sciences, Vol. vi, No. 10, May, 1916.
24. DuBois, Eugene: Jour. Wash. Acad. of Sciences, Vol. vi, No. 11, June, 1916.

PRACTICAL VALUE OF THE COMPLEMENT FIXATION TEST FOR GONORRHEA.

By MARTIN KROTOSZYNER, M. D., San Francisco.

In a recent article upon the "sero-diagnosis of gonorrhea," [1] attention was directed upon certain contradictory features and various serious drawbacks to the accuracy of the test, which are prone to create confusion instead of adding enlightment in doubtful cases. This being true, it is obvious that the practical value of the test as a diagnostic guide of last resort would be robbed of its most significant value. The points particularly interesting, and in need of elucidation in this connection, seem to be: Are serological and clinical findings coinciding at a percentage sufficiently high as to be of practical significance? Is the reaction of the test flexible enough as to indicate phases of exacerbation and remission and final extinction of gonorrheal infection? Is the test of practical value to patient and physician with regard to the all important questions of continued infectiousness and contemplated matrimony?

Five hundred complement fixation tests were made on 403 cases, which were conveniently grouped according to their clinical diagnoses.

The highest percentage of positive reactions (65%) was obtained in group 2 (acute and subacute ant. and post. urethritis) and the lowest (28%) in group 4 (urethral stricture). The average of positive reactions of all tests combined was 47.8%.

The positive reactions obtained in cases of acute urethritis of group 1 can be explained on the basis of a previous specific infection.

The 9th group of "miscellaneous" cases comprises clinical lesions in which a gonorrhoric infection was neither complained of by the patient nor suspected by the physician (prostatic hypertrophy, syphilis, renal lesions, etc.) In 31 of the 64 tests, made in this group of 62 patients, the reaction was positive. The greater number of these positive cases did not reveal, upon examina-

1. Cal. State Jour. of Med., Nov. 1916.

tion, any anamnestic or clinical evidence of gonorrhea.

In a number of cases, on the other hand, the examination, carried out with a view to corroborate the positive serological result, led to the discovery of a chronic specific focus.

There were also observed a few cases in which, in spite of manifest specific infection (gonorrheal prostatitis), a persistently negative reaction was recorded.

The result of the test in the large group of cases of chronic involvement of the urethral adnexae (prostatitis and vesiculitis) tallied fairly well with that reported by me previously (60 against 57%).

The group designated as sexual neurasthenia comprises those frequent affections of the genitourinary sphere, in which the intensity of the symptoms is not corroborated by any or only by insignificant clinical findings. The majority of these sufferers gave a history of a previous gonorrheal attack which, in their opinion, was responsible for the train of untoward symptoms. In 48 of the 66 cases, that came under observation (72.6%), the reaction was either doubtful or negative. The total of positive reactions, though, of 38 cases, or 40.5%, is surprisingly high in a condition with definite or negative underlying clinical findings. In a number of instances the test, upon repetition, remained positive and in some it even increased in intensity. It was in these few observations where the test exhibited its diagnostic value, since, upon repeated and painstaking local investigation, some apparently insignificant foci were detected, the removal of which sigralized improvement and cure. In one case, for instance, the removal of a few tiny, pinhead-like granulations on the veru montanum, which were detected by means of the irrigation-endoscope, was followed by abatement of long standing and severe subjective symptoms, and in another observation symptomatic relief was precipitated by the electrolytic treatment of a solitary Morgagni's crypt which, at first, had escaped endoscopic detection.

The value of the test for the correct interpretation of this type of cases seems the more striking on account of the well known continued infectiousness of these local conditions, which may stay active for many years, if proper local treatment is not instituted.

The relatively high percentage of positive reactions in this type of cases would, besides that, point to their intimate relation with the so-called latent stage of gonorrhea, in which no symptom of the disease is exhibited, and where a persistently positive serological result should be the indication for search of a focus by means of repeated microscopic, bacteriologic and endoscopic investigation. I am under the impression, that the percentage of pure neuroses will be reduced by these means, though it cannot be denied, that in many instances, the most painstaking examination will fail to reveal an anatomical basis for a continuously positive reaction.

This brings us to the important question of matrimony in connection with the complement fixation test for gonorrhea.

An analysis of this table demonstrates rather bizarre, if not confusing results.

Of 18 husbands 16 had a positive and 2 a negative reaction.

Both wives of the 2 husbands with a negative test had a positive reaction.

In 12 of the 16 husbands with positive tests no anamnestic and clinical findings could be obtained.

Both wives with positive reactions were found to be clinically free from gonorrhea.

Several observations, in which the positive reaction persisted on repetition of the test, concerned old men with healthy wives and large families. In most of these cases a gonorrheal attack in early manhood was admitted. The question then arises, in connection with these observations, whether in some generalized gonorrheal infections antibodies persist permanently.

In a number of matrimonial candidates with a previous gonorrheal infection and presenting negative clinical and persistently positive serological findings, I was able to follow up the outcome of the eventually effected matrimonial venture for several years past, and found it to be entirely satisfactory as regards wife and issue. I have, therefore, come to regard a positive reaction, unless very strongly positive, as not necessarily contraindicating permission to matrimony, provided the candidate be found clinically free from gonorrhea on repeated examination.

In order to ascertain data upon the flexibility of the test in connection with the clinical course of gonorrhoic infection serological tests in 77 cases were repeated at regular intervals.

In 30 cases, or 39%, the reaction changed from positive to doubtful or negative, demonstrating coincidence of improvement, or entire disappearance of clinical symptoms and bacteriological findings.

Nine cases, or 12%, showed serological alongside with clinical improvement by exhibiting a weaker positive reaction.

Twenty-seven cases, or 35%, remained serologically stationary at either positive or negative, independent of the clinical course.

Eleven cases, or 14%, showed, during treatment, a variable serological reaction which, in several instances, was entirely contradictory to the clinical course.

The foregoing tabulated investigations seemed to point to a comparatively wide discrepancy between clinical and serological findings. The further study of my material was, therefore, conducted with a view to ascertain some weak links in the chain of components of the complement fixation test for gonorrhea.

As pointed out in my previous report [2] the most important drawback to the accuracy of the test was considered to lie in the different prep-

2. l. c. p. 7.

aration and efficacy of various antigens, depending upon the character and number of gonococci-strains contained in polyvalent antigens.

A number of cases were, therefore, tested with various antigens, in order to study their effect upon the character and intensity of the reaction. Of 143 cases examined at the Pacific Wassermann Laboratory 24 were tested with one, 60 with 2, and 29 with 3 antigens. Of the 60 cases, examined with 2 antigens, 36 showed with both a negative, and 23 with both a positive reaction, and in only one case was a discrepancy found between a negative and positive result.

In my desire to obtain comparative data upon the effects of various antigens I submitted Dr. Warden's antigen, which he kindly forwarded to me, to 2 laboratories. This antigen, as stated by its maker,[3] is composed of the gonococcus fats dissolved in alcohol and has been employed in several hundred cases. One laboratory (Pac. Wassermann) found that antigen unsatisfactory "on account of being too hemolytic," while Dr. Werner, the serologist of the German Hospital, declared it to be highly anticomplementary when used in even weaker dilutions than those recommended by the maker. The antigen is at present only supplied for research purposes.

The following table contains comparative test-results by determinations with two or more antigens from two different laboratories.

In table VI-a, sixteen cases, or 55%, reacted uniformly negative, two cases, or 7%, reacted uniformly positive, showing, by these means, coincidence in 62%, while in 11 cases, or 38%, the test-results were slightly variable as regards intensity of positive reactions.

In table VI-b, fourteen cases, or 41%, reacted uniformly negative, two cases, or 6%, reacted uniformly positive, showing coincidence of tests with both antigens in 47%. In 7 cases, or 20%, the test-results varied slightly as regards positive reactions; while in some of the remaining cases reactions of glaring discrepancy occurred.

In order to prove to my own satisfaction the practical value of the test, as carried out at present at the average reputable laboratory, I gathered simultaneous reports from three different laboratories in a large number of cases.

This table shows that counting the doubtful results as negative, in 24 cases, or 24%, a uniformly negative, and in 7 cases, or 7%, a uniformly positive reaction was reported, giving a total of 31% of coinciding reports from all 3 sources, while in 69% of the cases more or less widely differing reports were submitted.

It is obvious, that the practical significance of the test is jeopardized, unless more uniform and reliable results can be obtained from the average reputable laboratory. There is a certain tendency extant in the ranks of the average practitioner to rely almost dogmatically upon laboratory reports and base upon their summary findings, after an incomplete and hasty clinical investigation, momentous decisions. If such a procedure will result in frequently disastrous errors in the case of syphilis, how much greater is the responsibility devolving upon the physician to render an opinion upon the future fate of a matrimonial candidate solely upon the strength of a laboratory-report based on the complement fixation-test for gonorrhea?

That the test is wanting in exactness and thus possesses serious drawbacks from a practical standpoint is becoming more generally appreciated. Most important factors in this connection, according to Kolmer [4] are difficulty of isolating and preserving a sufficient number of true strains of gonococci in order to prepare a satisfactory polyvalent antigen, and the weakness or indefinite character of complement-fixation reactions due to the slight quantity of antibody produced in a localized gonococcus infection. In other words: On account of the comparatively slight cellular involvement the quantity of antibody produced in a local gonorrheal focus is probably very small and, therefore, complement fixation reactions are generally weak and consequently the utmost technical attention is required, especially as regards preparation of antigen and accurate adjustment of hemolytic system.

The technique of the test as carried out by Dr. Werner at the German Hospital is as follows: The serum of the patient's blood is inactivated by heating to 56° C. for half an hour. Then the natural amboceptor is eliminated by adding an equal quantity of a 5% suspension of sheep's corpuscles in normal salt-solution and deamboceptrization is effected by incubating for 30 minutes at 37° C. After centrifugalizing, 0.4 of this serum is poured into each of 3 tubes containing complement and 2 antigens respectively, the first tube serving as anticomplementary control. They are then placed in a water-bath for 30 to 45 minutes.

Meanwhile the hemolytic system is titrated by mixing 0.2 of red-cells suspension with 0.1 of amboceptor in various dilutions, and 0.2 as well as 0.4 of complement respectively.

For the second incubation a 0.4 sheeps-corpuscles amboceptor mixture is used, which has been previously incubated for half an hour.

A number of tests were controlled by the use of the anti-human hemolytic system, but the results were not found to be more conclusive than those tested with the anti-sheep hemolytic system.

The Pacific Wassermann Laboratory submitted the following report upon their technique employed for the gonorrhea complement fixation test:

The technique employed for this test is identical with that used for the classical Wassermann reaction, with the exception of the antigens employed. For the gonorrhea test we use three different antigens made from gonococcus cultures. The antigens before being employed in the test proper, are titrated and tested for binding and

3. J. Am. Med. Ass'n., Feb. 1917.

4. Infection. Immunity and specific therapy; 1915, p. 484.

anticomplementary action and two units employed for the test.

The reaction is controlled by using tubes that control and prove the potency of all other reagents employed.

A known positive and negative serum is always run through with the tests.

Dr. Hirschfelder has described a "simplified" technique employed by him in the test [5] from the more general use of which he predicts more satisfactory and uniform results.

I have purposely dilated upon the question of laboratory-technique in order to disarm any criticism directed to that source of error.

Since the obtaining of pure culture of gonococci is very difficult, even at the hands of trained laboratory-workers, the average serological institution uses antigens furnished by large commercial laboratories, upon the accuracy of which the whole test rests. In the serological test for syphilis, on the other hand, every laboratory worker is able to produce and appropriately test his own antigen and, thus, obtain reliable and uniform results. The exclusion, in other words, of the personal equation in estimating the value of a self-prepared antigen, renders the reaction to the laboratory-worker himself less conclusive, who is well aware, that, even under observance of the most faultless technique, the result of the test may be vitiated by application of a poor antigen.

5. J. Am. Med. Ass'n., April 1916.

Conclusions.

Standardized technique and antigens are indispensable prerequisites toward rendering laboratory reports upon the complement fixation test for gonorrhea more uniform and reliable.

The test is valueless for practical purposes, unless uniform reactions can be obtained in at least 80 per cent.

Only strongly positive reactions are of diagnostic significance and may, occasionally, lead to the detection of a hitherto unsuspected specific focus.

A weakly positive, or doubtful reaction is, in all probability, entirely valueless for practical purposes, since an old and non-infectious, encapsulated gonococcic focus may produce a strongly positive result, while a matrimonial candidate with an infectious urethro-prostatitis may exhibit a weak or negative reaction.

It is safe to say, that the complement fixation test will never assume the importance for gonorrhea, that the Wassermann test possesses for syphilis.

TABLE I.

Result of Test According to Clinical Diagnosis.

Clinical Diagnosis.	Number of Cases.	Number of Tests.	Positive.	Negative.	Doubtful.	Per Cent. Positive.
1. Acute anterior urethritis	10	10	3	6	1	30%
2. Acute and subacute antero-posterior urethritis	18	20	13	6	1	65%
3. Chronic posterior urethritis, prostatitis and vesiculitis	194	238	143	79	16	60.1%
4. Stricture of urethra	5	7	2	4	1	28%
5. Epididymitis	23	36	21	9	6	58.3%
6. Gonorrheal artritis	4	6	3	3		50%
7. Sexual neurasthenia and impotence	66	94	38	47	9	40.4%
8. Vulvo-vaginitis and gynecological affections	21	24	12	9	3	50%
9. Miscellaneous	62	64	31	23	10	48.4%

TABLE II.

Positive Reactions Obtained in Non-Gonorrhoic Clinical Lesions Without Specific Findings and History.

Name and Age.	Diagnosis.	C. F.	Remarks.
C. B., 34	Pain in kidney region.	x	Married; 2 healthy children. No history of gonorrhea.
W. S., 69	Prostatic hypertrophy.	x	Gonorrhea many years ago. No symptoms.
M. A., 61	Prostatic hypertrophy.	xx	Gonorrhea 40 years ago. No symptoms.
J. B., 68	Cancer of prostate.	x	No history or symptoms of gonorrhea.
Mrs. L., 23	Renal tuberculosis.	x	No history. No symptoms of gonorrhea.
J. F. G., 51	Balano-posthitis. Circumcision.	x	Married 25 years. No symptoms or history of gonorrhea.
J. R., 27	Secondary syphilis.	xx	No history. No symptoms of gonorrhea.
H. W., 40	Progenital eczema.	x	No history. No symptoms of gonorrhea.
J. M., 34	Genital tuberculosis	x	Married; 2 healthy children. No history. No symptoms of gonorrhea.

x stands for a definite, and xx for a strongly positive reaction.

Name and Age.	Diagnosis.	C. F.	Remarks.
H. K., 25	Balano-posthitis.	x	No history. No symptoms of gonorrhea.
Mrs. W. C., 33	Nervous polyuria.	x	Pregnant 3 months; 2 healthy children. Findings for gonorrhea negative.
H. C. C., 40	Secondary syphilis.	x	No history. No symptoms of gonorrhea.
Mrs. W. S., 33	Chronic nephritis.	x	Three healthy children. No symptoms; no findings for gonorrhea.
Mrs. A. McC., 29	Secondary syphilis.	x	No symptoms. No findings for gonorrhea.
C. G., 35	Secondary syphilis.	x	No gonorrheal history. No findings.
H. S., 64	Cardio-renal hypertension.	x	No history. No symptoms of gonorrhea.
E. H., 69	Prostatic hypertrophy.	x	No symptoms; no history of gonorrhea.
H. K., 60	Cancer of bladder.	x	Several healthy children. Gonorrhea 40 years ago. No symptoms at present.
W. S., 60	Cyst of cord.	x	Gonorrhea many years ago; 6 healthy children. No symptoms. No findings of gonorrhea.
F. W., 51	Cardio-renal hypertension.	x	No history. No symptoms of gonorrhea.
N. W. F., 48	Sexual neurasthenia.	x	No symptoms. No findings for gonorrhea.
Mrs. L. S., 24	Reteroflexio uteri.	x	No symptoms; no findings for gonorrhea. Husband treated for gonorrhea several years ago.

TABLE III.

Miscellaneous, Apparently Non-Gonorrheic Lesions with Positive Focus which, upon Examination, Revealed a Specific Focus.

Name and Age.	Diagnosis.	C. F.	Remarks.
J. C. B., 33	Secondary syphilis.	xx	Prostatic juice; mass of pus cells. No gonococci.
M. G., 60	Incipient prostatism.	x	Prostatic juice; large amount of pus cells and dead spermatozoa. No gonococci. Gonorrhea many years ago.
G. C., 57	Balano-posthitis.	x	Posterior urethritis and prostatitis. Gonococci negative.
L. S., 29	Hemorrhoids.	x	Moderate prostatitis. No gonococci.
A. S., 46	Secondary syphilis.	xx	Chronic prostatitis. Gonococci doubtful.
J. C. H., 52	Frequent urination. Beginning prostatism.	xxx	Severe prostatitis. Gonococci positive.
J. E. M., 47	Sexual neurasthenia. Lumbago.	xx	Marked prostatitis and vesiculitis.
J. M., 46	Lumbago. Renal colic?	xxx	Marked prostatitis. Gonococci doubtful.
S. R., 22	Secondary syphilis.	xx	Severe prostatitis. No gonococci.
H. L., 25	Pain in left kidney region.	xx	Chronic prostatitis and vesiculitis. Gonococci positive.
L. E., 35	Multiple arthritis.		Severe prostatitis. Gonococci negative. Admitted acute gonorrhea several months ago.

TABLE IV.

Showing Relation of Serological and Clinical Findings as Ascertained in Married Couples.

Name and Age	Diagnosis.	C. F.	Diagnosis in Wife.	C. F.	Remarks.
H. H., 64	Prostatic Hypertrophy.	Pos.	No gonorrheal history; no findings.		Several grown up and healthy children.
L. S., 29	Chronic prostatitis.	Pos.	Retroflexio uteri; Adnexae free.	Pos.	Two healthy children. No gonococci in husband or wife.
L. S., 40	Polypi at internal sphincter.	Pos.	No findings for gonorrhea.		Two healthy children; last confinement one week ago.
J. C. K., 29	Chronic prostatitis.	Neg.	Slight vaginal mucous discharge.	Pos.	No gonococci in either husband or wife.
W. S., 34	Chronic nephritis.	Neg.	Chronic nephritis.	Pos.	No history of gonorrhea; no symptoms; 3 healthy children.
W. H. McC., 33	Chronic prostatitis.	Pos.	Slight vaginal mucous discharge.	Neg.	Husband Epidym 6 months ago. At present no symptoms. Gonococci negative in both; three healthy children.
J. C., 32	Chronic prostatitis.	Pos.	Slight vaginal mucous discharge.	Neg.	Gonococci negative in both.
W. S., 33	Chronic prostatitis; Secondary syphilis.	Pos.	Severe mucopurulent vaginal discharge.	Neg.	Husband: Gonorrhea 2 years ago; gonococci negative in both.

Name and Age.	Diagnosis.	C. F.	Diagnosis in Wife.	C. F.	Remarks.
W. H. McN., 29	Sexual weakness.	Pos.	Pregnant 3 months Adnexae free.	Neg.	Husband: No history of gonorrhea; no symptoms; gonococci negative in both.
H. F., 37	Chronic prostatitis; Sexual weakness.	Pos.	Adnexae free; no symptoms of gonorrhea.	Neg.	Married 15 years; one healthy daughter of 14; Gono. negative in both.
J. E. G., 33	Secondary syphilis.	Pos.	No findings for gonorrhea.		No history of gonorrhea in husband; no gonococci.
W. S., 69	Prostatic hypertrophy.	Pos.	No symptoms; no findings for gonorrhea.		Large family of grown children, all married.
F. C. W., 51	Cardio renal hypertension.	Pos.	No symptoms; findings for gonorrhea negative.		Husband: No history of gonorrhea; gono. negative.
A. R., 57	Left-sided orchitis.	Pos.	No symptoms; no findings for gonorrhea; several miscarriages.		Wassermann ××; no gonococci.
W. S., 60	Cyst of cord on left side.	Pos.	No symptoms; no findings for gonorrhea.		Gonorrhea 40 years ago, gono. negative; six grown, healthy children, all married.
W. H. W., 33	Chronic prostatitis.	Pos.	No symptoms; no findings for gonorrhea; Adnexae free.	d	Gonorrhea 3 years ago; gonococci negative in both.
E. H., 68	Prostatic hypertrophy.	Pos.	No symptoms; no findings for gonorrhea.		Five grown children, all married; gon. negative in both.
H. K., 61	Cancer of bladder.	Strongly Pos.	Cancer of bowels. Died recently.		Wassermann ×××; 3 healthy children; gono. negative; no symptoms.

d stands for doubtful

TABLE V.

Containing 77 Cases, with Clinical Diagnosis and Findings at Discharge, in which Two and More Tests Were Made.

Name.	Diagnosis.	Compl. fix.	Remarks.
F. G.	Chronic prostatitis.	xx, —	Prostatic juice. Mass of pus-cells. No lecithin. Symptomatically improved.
E. J. G.	Sexual neurasthenia.	d, —	No history of gonorrhea. No symptoms.
A. S. H.	Sexual neurasthenia.	—, x, —, —	No history of gonorrhea. No symptoms.
A. S. J.	Chronic prostatitis.	xx, x, —	Gonorrhea 3 years ago. Symptomatically improved.
G. A. J.	Chronic prostatitis.	x, —	Symptomatically improved. Prostate still shows many pus-cells.
C. A. J.	Chronic prostatitis.	xx, x, —	No symptoms. Gonococci negative at discharge.
G. A. J.	Chronic prostatitis.	x, —	No symptoms. Gonococci negative at discharge.
C. K.	Chronic prostatitis. Sexual neurasthenia.	xx, x, xxx, —	Prostatic juice; mass of pus-cells; when last seen. Gonococci negative.
F. K.	Balano-posthitis. Circumcision.	—, xx	No history of gonorrhea. Prostatic juice normal. Gonococci negative.
A. L.	Subacute ant. and posterior urethritis.	xx, —	Condition 3 months' standing. No symptoms. Gonococci negative at discharge.
J. L.	Chronic prostatitis and vesiculitis.	x, —	Marked improvement at discharge. Prostatic juice; a number of pus-cells. Gonococci negative.
J. L.	Sexual neurasthenia.	x, —, —	Had gonorrhea 3 years ago. No symptoms. Gonococci negative.
E. N.	Sexual neurasthenia.	x, xx, —	Had gonorrhea several years ago. No symptoms. Gonococci negative.
M. McM.	Sexual neurasthenia.	xx, x, —	Had gonorrhea many years ago. Findings negative. Gonococci negative.
J. C. McD.	Gon. epididymitis and prostatitis.	xx, —	Prostate; mass of pus-cells. No lecithin. Gonococci doubtful.
W. McP.	Chronic prostatitis.	x, —	Symptoms of sexual neurasthenia. No findings. Gonococci negative.
C. M.	Chronic prostatitis.	d. —	No findings. Gonococci negative at discharge.
K. M.	Chronic prostatitis.	x, —, —	No findings. Gonococci negative at discharge.
C. M.	Gon. epididymitis and prostatitis.	x, —	Prostate; mass of pus. Gonococci positive.
G. U.	Sexual neurasthenia.	x, xx, —	Findings for gonorrhea negative. Gonococci negative.
A. W.	Sexual neurasthenia.	x. —	No findings for gonorrhea. Gonococci negative.

— stands for negative reaction.

Name.	Diagnosis.	Compl. fix.	Remarks.
C. W.	Vulvo-vaginitis.	x, —	Vaginal discharge less purulent. No gonococci found in spite of frequent search.
C. P.	Chronic prostatitis. Sexual neurasthenia.	x, x, —, xx	No findings for gonorrhea. Gonococci negative.
C. R.	Chronic prostatitis and vesiculitis.	xx, x	No symptoms at present. Gonococci negative.
J. S.	Sexual neurasthenia.	xx, x, x	Had gonorrhea several years ago. No findings. Gonococci negative.
M. B.	Abscess of prostate. Gonococci positive.	x, x	Symptomatic cure. Prostate normal. Gonococci negative.
M. C.	Chronic prostatitis. Gonococci positive.	—, —, —	Prostate still contains many pus-cells. Reduced lecithin. Gonococci at present negative.
N. F.	Sexual neurasthenia.	x, x	Prostatic juice normal. No symptoms. Admits gonorrhea many years ago. Gonococci negative.
F. G.	Chronic prostatitis. Gonococci positive.	—, —	Wassermann xxx. Prostate mass of pus. No lecithin. Still under treatment.
E. G.	Chronic prostatitis. Acute epididymitis.	x, x	Married; wife healthy. Symptomatically improved. Gonococci negative.
A. S. G.	Chronic prostatitis.	—, —	Gonorrhea 15 years ago. No symptoms. Gonococci negative.
R. G.	Chronic prostatitis.	—, —, —	Prostate normal. Gonococci negative.
A. L.	Gonorrheal epididymitis.	—, —	Prostate normal. At present gonococci negative.
J. E. M.	Chronic prostatitis.	x, x, x, x	Prostatic juice; mass of pus; no lecithin. Of late less pus, appearance of lecithin. Gonococci never found.
O. M.	Sexual neurasthenia.	x, x	Had gonorrhea several years ago. No symptoms. Gonococci negative.
G. M.	Chronic prostatitis.	d, d —	Had gonorrhea several years ago. At present no symptoms. Gonococci negative.
K. M.	Varicocele. Sexual neurasthenia.	—, —	Prostate normal. Gonococci negative.
J. V.	Chronic prostatitis.	—, —	At present no symptoms. Gonococci negative.
H. W.	Stricture of ant. urethra.	—, —	Prostatic juice normal. Gonococci negative.
F. W.	Cardio-renal hypertension.	x, x	No history of gonorrhea. No findings. Gonococci negative.
J. S.	Sexual neurasthenia.	x, d	No gonorrheal history. Married. Wife healthy. No findings. Gonococci negative.
M. A.	Prostatic hypertrophy.	x, d	Had gonorrhea 40 years ago. No findings. Gonococci negative.
O. J. B.	Gon. epididymitis and prostatitis.	xx, d	Prostatic juice contains many pus-cells. Gonococci negative at discharge.
O. G.	Gonorrheal epididymitis.	xxx, x	Gonococci had disappeared at last examination.
T. G.	Chronic prostatitis and vesiculitis.	xx, xxx	Prostatic juice mass of pus-cells. Dead spermatozoa. Gonococci positive. No gonococci found when last examined.
M. L.	Chronic prostatitis. Gonococci positive.	x, d	Prostatic juice; many pus-cells; some lecithin. No gonococci when last seen.
L. M.	Chronic prostatitis.	x, xx	Prostate; moderate amount of pus-cells. Gonococci negative.
J. F. M.	Secondary syphilis. Chronic prostatitis.	xx, x	Prostate; moderate amount of pus-cells. Gonococci negative.
J. O.	Sexual neurasthenia.	xxx, x	Prostatic juice normal. No findings. Gonococci negative.
J. P.	Chronic prostatitis.	x, d	Gonococci negative.
J. S.	Chronic prostatitis.	xx, x	Prostate; mass of pus. Gonococci negative. Patient recently married. Wife healthy; 3 months pregnant.
S. T.	Gonorrheal epididymitis.	xx, x	Gonococci positive. Symptomatically improved at present. Gonococci negative.
P. Y.	Chronic prostatitis.	xx, x	Prostate: mass of pus. No lecithin. Symptomatically improved. Gonococci negative.
M. P.	Epididymitis.	—, —	Prostatic juice normal. Married recently. Wife healthy.
C. R.	Sexual neurasthenia.	d, d	Gonorrheal history. No findings at present. Gonococci negative.
W. R.	Chronic prostatitis.	x, x, x, x	Severe nervous symptoms. Prostatic juice mass of pus-cells. No lecithin; local and general symptoms markedly improved. Gonococci negative.
J. S.	Sexual neurasthenia.	—, —	No findings. Gonococci negative.

Name.	Diagnosis.	Compl. fix.	Remarks.
J. S. S.	Chronic prostatitis. Secondary syphilis.	x, x	Prostatic juice; moderate amount of pus-cells. Gonococci negative.
J. B.	Chronic prostatitis. Secondary syphilis.	xx, xx	Prostatic juice; moderate amount of pus-cells; no other symptoms. Gonococci negative.
A. B.	Sexual neurasthenia. Chronic prostatitis.	—, —	Gonococci negative.
A. L. R.	Chronic prostatitis.	x, —, —	No symptoms. Gonococci negative at discharge.
J. S.	Chronic prostatitis and vesiculitis.	xx, xxx, d, —, x	Symptoms gradually improving. Tests made at monthly intervals.
A. S.	Subacute gon. ant. urethritis, 6 weeks' standing.	x, d,	Cured after 6 weeks' treatment. Symptoms and gonococci negative.
W. S.	Chronic prostatitis.	x, —	Prostatic juice contains mass of pus. No gonococci. Married; wife no symptoms.
J. S.	Sexual neurasthenia.	xx, x	Had gonorrhea several years ago. At present negative findings. No gonococci.
A. S.	Chronic prostatitis and vesiculitis.	xx, x, —, d	Symptoms gradually improving. Prostatic juice contains moderate amount of pus. Gonococci negative.
A. S.	Chronic prostatitis.	—, x	Wife after several months of absence abroad shows acute valvo-vaginitis. Gonococci negative.
A. A.	Sexual neurasthenia.	d, —	No history of gonorrhea. No symptoms.
O. A.	Chronic prostatitis.	—, x	Gonorrhea several years ago. Patient considerably improved. Gonococci negative.
M. B.	Chronic prostatitis.	xx, —	No more symptoms. Gonococci negative.
J. C.	Chronic prostatitis.	—, x	Prostatic juice shows mass of pus. Symptomatically improved. Gonococci negative.
W. J. C.	Gonorrheal arthritis.	x, xx, —	No symptoms. No gonococci at discharge.
R. F.	Secondary syphilis.	d, —	No history of gonorrhea. No symptoms.
G. F.	Chronic prostatitis. Sexual neurasthenia.	x, —	No symptoms. Gonococci negative at discharge.
A. J. F.	Gonorrheal epididymitis and prostatitis.	d, —, —,	Prostatic juice shows many pus-cells. No symptoms. Gonococci negative.
J. G.	Chronic prostatitis and epididymitis.	d, —	Prostatic juice shows many pus-cells. At left epididymis hard nodule.
E. G.	Chronic prostatitis and vesiculitis.	—, xx	Urine cloudy, containing much pus microscropically Prostatic and vesicular secretion: Abundant pus. No gonococci.

— stands for negative.

TABLE VI.

A

Containing 29 cases examined at the Pacific Wassermann Laboratory with three different antigens.
McN.=McNeil's.
P. W. L.=Pacific Wassermann Laboratory.
P. D.=Parke, Davis & Co.

Name	McN.	P. W. L.	P. D.
M.	—	—	—
J. H. B.	—	—	—
K.	—	—	—
W.	—	—	—
E.	—	—	—
N.	—	—	—
P.	—	—	—
C. L.	—	—	—
Mrs. H. K.	—	—	—
O. H.	—	—	—
H. S.	—	—	—
V.	—	—	—
W.	—	—	—
W. S.	—	—	—
S. R.	—	—	—
S.	—	—	—
A.	x x x	x x x	x x x

B

Containing 34 cases examined at the Serolog. Lab. of the German Hospital with two different antigens.
M.=Mulford's.
W.=Warden's.

Name.	M.	W.
C. R. P.	—	—
E. L. R.	—	—
W. W.	—	—
W. S.	—	—
A. E. G.	—	—
H. H.	—	—
H. B.	—	—
M. A.	—	—
W. S.	—	—
W. R.	—	—
Mrs. L. S.	—	—
M. Z.	—	—
J. S.	—	—
A. D.	—	—
A. S.	x	x
D. H.	xx	xx
M. S.	xx	—

Name	McN.	P. W. L.	P. D.
C.	x x x	x x x	x x x
R.	x x	x x x	x x x
B.	x x	x x x	x x
C.	x	x	—
M. C.	x x x	x x x	x x
L.	x x	x x x	x x
B.	x x	x x x	x x
H.	x x x	x x x	x x
H.	x	x x	x
M. B.	x x	x x	x x x
L.	x x	x x x	x x
E. G.	x	x x	x

Name	M.	W.
E. S.	—	x
L. S.	—	xx
J. V.	x	xx
R. F.	—	xx
G. K.	—	x
J. H.	x	—
J. B.	—	xx
F. G.	xx	—
M. B.	x	xx
B.	xx	xxx
C. B.	x	xxx
A. B.	d	xxx
O. L.	x	xx
A. S.	xx	x
S. B.	—	x
A. J. R.	—	x
A. A.	x	xx

TABLE VII.

Table of 100 cases containing brief clinical data, and serological results, as reported by three laboratories. Gon.=gonococci; H.=Dr. J. O. Hirschfelder's laboratory; Pac.=Pacific Wassermann Lab.; G. H.=Lab. of German Hospital.

Name and Age.	Diagnosis.	Gon.?	Compl. fix. tests. H.	Pac.	G. H.	Remarks.
J. F.—40	Negative findings as regards gonorrhea.	No.	x	x	—	No history of gonorrhea.
J. F. McC.—21	Primary lesion on penis.	No.	xx	—	—	Negative findings for gonorrhea. Gonorrhea 8 months ago.
A. A.—32	Negative findings for gonorrhea.	No.	x	—	xx	Gonorrhea 1913 and 1914, complicated by swollen testicles.
S. T.—27	Gonorrheal Epididymitis.	Yes.	xx	xxx	xx	First attack of gonorrhea 9 months ago.
S. W.—30	Secondary syphilis negative findings for gonorrhea.	No.	—	x	—	Married. Wife sound. One healthy baby.
G. U.—25	Sexual neurasthenia colliculitis.	No.	x	xx	—	Gonorrhea 18 months ago.
L. N.—26	Chronic prostatitis.	No.	x	xx	—	Gonorrhea 8 years ago.
J. C.—36	Chronic prostatitis polyp. at int. sphincter.	Yes.	—	—	—	Sexual weakness, ejaculatio praecox.
F. G.—39	Chronic prostatitis colliculitis.	No.	—	xxx	xx	Wassermann xxx.
R. R.—24	Chronic prostatitis colliculitis.	No.	x	xx	d	Gonorrhea 3 years ago.
H. W.—30	Stricture in ant. urethra near ext. sphincter.	No.	—	—	—	Gonorrhea 3 years ago.
O. A.—45	Chronic prostatitis.	No.	—	—	—	Sexual weakness. Gonorrhea 6 years ago.
A. D.—32	Acute ant. gono. urethritis.	Yes.	—	—	d	Gonorrhea 4 years ago.
F. R. B.—44	Balano-posthitis.	No.	—	—	d	No history of gonorrhea.
G. C.—30	Secondary syphilis.	No.	—	—	d	No history of gonorrhea.
P. M.—24	Chronic prostatitis.	No.	x	xxx	x	
A. L. R.—41	Chronic prostatitis colliculitis.	No.	—	xxx	—	Married. Wife healthy. One healthy child.
P. B.—29	Cerebro-spinal syphilis.	No.	—	x	d	Left seminal vesicle enlarged and indurated.
H. R.—26	Subacute ant. gon. urethritis.	Yes.	—	—	d	Profuse spontaneous discharge at meatus. Gonorrhea 6 weeks standing.
W. Z.—28	Chronic ant. urethritis.	No.	xx	x	—	
W. M.—27	Acute ant. gon. urethritis.	Yes.	—	—	—	Had several gonorrheal attacks during past few years.

d stands for "doubtful."
— stands for negative.

Name and Age.	Diagnosis	Gon.?	Compl. fix. tests. H.	Pac.	G. H.	Remarks.
F. G.—34	Chronic prostatitis.	No.	x	xxx	xx	Secondary syphilis. Wassermann positive.
J. S.—24	Chronic prostatitis.	No.	x	—	d	Prostatic juice contains many pus-cells and many dead spermatozoa.
G. P.—37	Cyst at verumont.		d	—	—	Findings for gonorrhea negative.
J. G.—22	Left sided varicocele.	No.	x	—	—	Negative findings for gonorrhea. No history of gonorrhea.
J. B.—30	Chronic prostatitis.	No.	xx	—	d	
A. S.—30	Chronic prostatitis.	No.	d	xx	xx	
A. G.—39	Stricture in ant. urethra.	No.	d	—	—	
A. B.—24	Sexual neurasthenia.	No.	—	—	d	Gonorrhea one year ago. Negative findings for gonorrhea.
C. W.—60	Sexual neurasthenia.	No.	—	x	—	Admits two previous attacks of gonorrhea. Negative findings for gonorrhea.
C. B.—36	Neurasthenia. Pain in left kidney region.	No.	x	—	x	Never had gonorrhea. Negative findings for gonorrhea. Married. Wife and children healthy.
W. S.—69	Prostatic hypertrophy.	No.	x	x	—	Suprapubic prostatectomy. Admits attack of gonorrhea over 40 years ago. Married, healthy children. Negative findings for gonorrhea.
J. B.—76	Cancer of bladder.	No.	—	xxx	xx	Had gonorrhea in 1881 resulting in stricture. Negative findings for gonorrhea.
A. G.—32	Spinal syphilis (Tabes).	No.	d	xx	—	Never had gonorrhea. Wife healthy.
Mrs. M. B.—25	Muco-purulent discharge from vagina and cervix.	No.	—	xxx	x	Examination requested by patient claiming to have contracted acute gonorrhea from her.
H. H.—66	Prostatic hypertrophy.	No.	x	xxx	—	No findings of gonorrhea. No history of gonorrhea.
R. F.—23	Secondary syphilis.	No.	—	—	—	No history of gonorrhea. No findings.
Mrs. W. Z.—29	Bilateral parametritis.	No.	x	xx	—	Slight vaginal discharge. Two children healthy. Husband treating for gonorrhea.
L. S.—29	Chronic prostatitis.	No.	—	xxx	—	Was treated 5 years ago for prostatic gonorrhea. Married. Wife healthy; two healthy children.
Mrs. L. S.—24	Retroflexio uteri.	No.	x	x	—	Wife of preceding case. No findings for gonorrhea.
R. S.—30	Secondary syphilis.	No.	—	—	xx	A few pus cells in prostatic juice, otherwise no findings for gonorrhea.
A. S.—45	Chronic prostatitis. Secondary syphilis.	No.	xx	x	x	Gonorrhea 5 years ago. Ejaculatio praecox.
Mrs. A. S.—34	Vulvo-vaginitis.	No.	d	—	—	Wife of previous case. Slight mucous vaginal discharge.
L. S.—40	Polypi at int. sphincter.	No.	—	x	—	Married. Wife and 2 children healthy. Gonorrhea 15 years ago. No findings.
W. B.—27	Acute gon. prostatitis and seminal vesiculitis.	Yes.	—	—	x	Admits several previous gonorrheal attacks, present condition 6 weeks' standing.
J. V.—29	Acute ant. gon. urethritis.	Yes.	xx	—	x	Never had gonorrhea before. Case of 1 day's standing.
Mrs. F. H.—52	Left sided paramethritis.	No.	—	xx	x	Salpingectomy 25 years ago.
W. C. S.—30	Chronic prostatitis.	No.	—	—	—	Had several gonorrheal infections. Married; wife no symptoms.
V. M.—34	Chronic prostatitis and colliculitis.	No.	x	—	—	No history of gonorrhea.
J. B.—69	Carcinoma of prostate.	No.	x	xxx	—	Prostatectomy. Negative findings for gonorrhea.
M. A.—61	Prostatic hypertrophy.	No.	x	xx	—	Had gonorrhea 40 years ago. Negative findings for gonorrhea.
D. W. H.—78	Acute ant. gon. urethritis.	Yes.	—	xxx	xx	Acute retention due to enlarged prostate. Gonorrhea 3 months old.
W. R.—32	Chronic prostatitis.	No.	x	xx	—	Sexual neurasthenia.
G. K.—33	Colliculitis. Sexual neurasthenia.	No.	—	xx	—	Patient had several gonorrheal infections since 1912.
S. Boro—29	Secondary syphilis.	No.	x	—	—	Negative findings for gonorrhea.
A. D.—40	Ant. subacute gon. urethritis.	Yes.	—	xxx	—	Gonorrhea 6 weeks' standing. Several gonorrheal infections during last 7 years.
O. L.—40	Colliculitis. Sexual neurasthenia.	No.	—	x	x	Negative findings for gonorrhea. Had gonorrhea 3 months ago.

d stands for "doubtful."

Name and Age.	Diagnosis	Gon.?	Compl. fix. tests. H.	Pac.	G. H.	Remarks.
C. S. P.—28	Chronic prostatitis.	No.	—	xxx	—	Sexual weakness.
L. R.—38	Chronic prostatitis colliculitis.	No.	—	—	—	Had gonorrhea 7 years ago.
A. O.—25	Lumbago. Neurasthenia.	No.	x	xxx	—	Negative findings for gonorrhea.
H. B.—21	Subacute ant. gon. urethritis.	Yes.	xxx	xxx	—	Secondary syphilis. Wassermann xxx.
Mrs. W. C.—33	Squamous eczema.	No.	x	—	x	No history of gonorrhea. Married; healthy children.
C. P.—28	Chronic prostatitis.	No.	xx	xxx	—	Sexual neurasthenia.
O. H.—27	Chronic prostatitis.	No.	x	xx	—	Sexual neurasthenia.
J. E.—51	Chronic prostatitis.	No.	x	—	—	Had several gonorrheal infections previously.
F. F.—28	Balano posthitis.	No.	—	—	x	Circumcision. Negative findings for gonorrhea.
W. E. P.—32	Chronic prostatitis and colliculitis.	No.	—	—	x	Cerebro-spinal syphilis. Wassermann xxxx.
P. Y.—25	Chronic prostatitis.	No.	x	—	—	
J. S.—24	Chronic prostatitis.	No.	—	xx	x	
F. W.—51	Cardio-renal hypertension.	No.	x	—	d	Never had gonorrhea. Prostatic juice normal.
F. W. R.—27	Acute gonorrhea since 3 days.	Yes.	x	—	—	
de W.—65	Spinal syphilis.	No.	d	—	—	
E. L.—63	Chronic myocarditis.	No.	—	—	—	
S. S.—25	Gonorrhea about 6 weeks	Yes.	d	—	d	
M. D. J.—35	Chronic prostatitis.	No.	—	—	d	Sexual neurasthenia.
A. R.—33	Sexual neurasthenia.	No.	—	—	—	
A. A.—25	Sexual neurasthenia.	No.	d	—	—	
Boyd—39	Chronic prostatitis stricture of anterior urethra.	No.	d	—	x	Sexual weakness.
P. L.—38	Secondary syphilis. Chronic prostatitis.	No.	xx	—	—	
F. L.—35	Periurethral abcess gonorrheal prostatitis.	Yes.	d	—	x	Gonorrhea of 2 months' standing.
F. A.—18	Chronic prostatitis.	No.	x	—	—	
M. B.—26	Subacute posterior urethritis. Prostatic abcess.	Yes.	x	xxx	d	First attack 2 months' duration.
C. L.—65	Syphilitic cavernitis.		—	x	—	Prostatic juice normal. Wassermann xx.
A. B.—24	Chronic prostatitis.	Yes.	—	—	—	
J. S.—38	Sexual neurasthenia.	No.	x	—	—	Chancre 10 years ago.
A. S.—26	Chronic prostatitis.	No.	x	—	—	Sexual neurasthenia.
H. M.—23	Chronic prostatitis and spermato cystitis.	No.	x	xxx	xx	
J. E. M.—46	Chronic prostatitis.	No.	x	xxx	x	
R. D. G.—46	Chronic prostatitis.	No.	—	—	—	Gonorrhea 15 years ago.
G. S. S.—24	Chronic prostatitis.	No.	x	—	—	
J. H.—25	Chronic prostatitis and vesiculitis.	No.	xx	xxx	x	
N. G.—28	Chronic prostatitis.	No.	x	xxx	—	Sexual neurasthenia.
J. M. W.—25	Chronic prostatitis and seminal vesiculitis.	Yes.	x	x	—	Gonorrhea for last 9 months.
E. B.—36	Aoxaluria neurasthenia.	No.	—	xx	—	Never had gonorrhea. No findings.
W. H. H.—52	Chronic prostatitis.	Yes.	xx	—	xxx	Gonorrhea 14 years ago. Stricture and epididymitis 5 years ago.
Mrs. W. S.—34	Chronic nephritis.	No.	x	x	—	No findings for gonorrhea. Three healthy children. No findings for gonorrhea in husband.
H. S. J.—29	Secondary syphilis.	No.	—	—	—	Admits two attacks of gonorrhea 10 and 7 years ago. Wife pregnant 3 months. Negative findings for gonorrhea.
L. B.—51	Neurasthenia.	No.	—	xxx	—	Married. Wife and son healthy. No findings.
A. M.—16	Subacute ant. urethritis.	Yes.	xx	—	—	Gonorrhea since last 5 months.
Mrs. P. O.—27	Chronic pelvic peritonitis.	No.	—	x	—	Vaginal discharge since last 2 years.

d stands for "doubtful."

Book Reviews

The Surgical Clinics of Chicago, Volume I, Number VII (December 1917). Index Number. Octavo 245 pages, 89 illustrations. Philadelphia and London: W. B. Saunders Company; published bi-monthly. Price per year: Paper, $10.00; cloth, $14.00.

Contents.

Dean Lewis: Separation of lower epiphysis of femur with anterior displacement and T-fractures. Myositis ossificans developing in clean incised abdominal wound. Blastomycosis and sporotrichosis. H. L. Kretschmer: Tuberculosis of kidney. L. E. Schmidt: Technic of prostatectomy. A. J. Ochsner: Actinomycosis. Carcinoma of rectum. C. B. Davis: Cancer of rectum. A. D. Bevan: Carcinoma of rectum X-ray burn of anal region. Suprapubic prostatectomy. C. H. Davis: Clinical talk on anesthesia in gynecology and obstetrics. F. S. Cary: Stubborn cystitis. C. Beck: Temporary enterostomy. F. A. Besley: Fractures. P. H. Kreuscher: Hypertrophic villous synovitis of knee-joint. F. C. Dyas: Treatment carcinoma of tongue with radium. Old fracture of patella. D. N. Eisendrath: Gunshot wound of femur. K. Speed: Right upper quadrant appendicitis.

The Medical Clinics of North America. Volume I Number III (The New York Number, November 1917). Octavo of 346 ages, 37 illustrations. Philadelphia and London: W. B. Saunders Company, published bi-monthly. Price per year: Paper, $10.00; cloth, $14.00.

Contents.

W. T. Longcope: Acute tuberculosis. Graham Lusk: Calories in common life. M. Einhorn: Diet in diseases of kidneys. C. G. Kerley: Apparent and real appetite defects in young. Warren Coleman: Typhoid diet. R. I. Cole: Lobar pneumonia. A. E. Cohn: Clinical pharmacology of digitalis. E. Libman: Affections of valves of heart. Harlow Brooks: Combined chlorin gas and trinitrotoluene poisoning. A. F. Chace: Diet in interstitial nephritis. Wm. R. Williams: Effusion in pleural, pericardial and peritoneal cavities with artificial pneumothorax. H. F. Swift: Rheumatic fever. W. W. Palmer: Acidosis; diabetes mellitus and chronic nephritis with severe acidosis. W. A. Bastedo: Mucous colitis. L. G. Cole: Ileocecal incompetency. O. M. Schloss: Intestinal intoxication and acidosis in infant. A. F. Hess: Vaginitis (cervicitis) in infants. R. A. Cooke: Protein sensitization in human with special reference to bronchial asthma and hay-fever. W. L. Niles: Meningitis. A. L. Holland: Fluoroscopic method of diagnosis in digestive disease. H. R. Geyelin: Diabetes. J. J. King: Systemic conditions as the result of tonsillar infections.

Elements of Science of Nutrition. By Graham Lusk. 3rd Edition, Reset. Philadelphia: W. B. Saunders Co. 1917.

In the ever growing mass of detail which constitutes the basis of modern scientific instruction, the department of metabolism, more perhaps than any other, is one where the average practitioner finds it most difficult to search out the wheat from the chaff and formulate a general theory that he can usefully employ in his daily routine.

We have monographs of individual experimentation, and we have text-book articles. The first give us too much and that often with bias, the latter are too often merely summaries of supposed conclusions without an understanding of the ways by which they have been obtained. Some ten years ago, Dr. Graham Lusk published his Elements of the Science of Nutrition, and the modest volume he then gave the profession has been one of the most useful of its time. Scarcely a month has passed, during which I have not had occasion to recommend it to some of my students or colleagues. It had, and the new edition has, a happy faculty of deducing the final conclusions from a picked group of experimental data, the detailed nature of which is presented in simple language to the reader. Now there appears the third edition, in which the same method is pursued and which embodies the enormous extension of our knowledge during the last ten years. Of necessity this has more than doubled the size of the book, and proportionately added to its value. It is a work that no earnest student or practitioner of internal medicine can afford to have absent from his shelves. H. D'A. P.

Practical Treatment, Volume IV. By 76 eminent specialists. Edited by John H. Musser Jr., M. D., Associate in Medicine, University of Pennsylvania; and Thomas C. Kelly, M. D., Instructor in University of Pennsylvania. Desk Index to the complete set of four volumes sent with this volume. Octavo, 1000 pages. Illustrated. Philadelphia and London: W. B. Saunders Company. 1917. Cloth, $7.00 net; Half Morocco, $8.50 net.

The fourth volume of this series has been brought out in order to give the various original contributors opportunity to bring the discussion of their subjects "up to the minute." Several contributors, unable to undertake revisions of their articles, have been replaced by others who have entirely rewritten the chapters involved.

The book as a whole is an excellent one. There are several chapters which could be read with profit by every medical man. We would call especial attention to Rowntree's chapters on nephritis, Dochez's articles on specific therapy of pneumococcus infection. Goodale on hay fever and hay asthma, and Sailer and Goldthwait on the treatment of visceroptosis and allied disorders. R. B.

Principles and Practice of Dermatology. By Wm. Allen Pusey. 3rd edition. New York: Appleton. 1917.

Pusey's new book should well fill the desire of the author. It is up to date on the subject, is delightfully pleasing in the way it is written, and it is not too long. All of the descriptions are clear and they seem to express much of the author's own impressions which, unfortunately, is often not true in medical textbooks. The section on syphilis is more exhaustive than is usually the case in textbooks on dermatology; this alone should make it valuable to any student or practitioner, whether general or of a specialty. The article on pellagra is excellent and should be of exceptional interest.

The plates and photographs have been well chosen from numerous excellent collections, including the large collection of the author. They should be very helpful to the diagnostician, as they are such typical portrayals of their respective diseases.

To read the book critically would be worth while as there is so little in it to comment upon adversely. As a textbook it would seem to be one of the best. The reviewer can recommend it highly. G. D. C.

Physical Diagnosis. By W. D. Rose. St. Louis: Mosby. 1917.

Doctor Rose is to be complimented on having written an admirable compend to be used as an adjunct to a good course on physical diagnosis or as a very brief reference for an extremely busy practitioner. The first part dealing with the thorax and, to a much less degree, the second part, dealing with the abdomen, are treated with a fair amount of thoroughness. The rest of the work, comprising the head, neck and extremities, is so meagrely

handled that it may as well be disregarded. This work, like so many others that are needlessly boosting the high cost of paper, ink, etc., is of that huge number of American text-books that develop habits of superficiality in the readers thereof. If the writer had confined himself to the thorax alone and amplified the really good presentation of this part of the subject, he would have contributed to the literature a volume that would find a field of usefulness as a students' text or even a reference work. The chief objection is the lack of both comprehensive and positive information on any of the subjects included in the book. G. H. T.

Obstetrics. By J. W. Williams. 4th Edition. New York: Appleton. 1917.

There is a very pleasant feeling of anticipation in settling down for a review of the last edition of this work,—the pleasure of recognizing development and ripening wisdom in a friend of many years. There is still a sympathetic understanding of the needs of the student, and for them no fundamental detail has been slighted, while for the practitioner there is a practical review of obstetrical study to date. Some details are particularly interesting, and we note especially the discussion of the toxemias, the marshaling anew of phases of dystocia, the broadening of the indication for therapeutic abortion in maternal tuberculosis. Also it is a comfort to have the author sound an unmistakable warning regarding meddlesome interference in labor, and an urgent appeal for conservative assistance. It is a good book to have beside one. E. K.

Sanitation for Medical Officers. By Edw. B. Vedder. Illustrated. Philadelphia: Lea & Febiger. 1917. Price $1.50.

This book is No. 1 of a series of medical war manuals authorized by the Secretary of War and under the supervision of the Surgeon General and the Council of National Defense. Sections are devoted to sanitation in camp, on the march, in the trenches and battlefield. It considers in an efficient manner the insects concerned in the transmission of disease and gives as valuable notes on transmissible disease as can be found in any books,—and in more convenient form. An invaluable book for civilian doctors as well as those in the military service. J. H. C.

Technic of Irrigation Treatment of Wounds by Carrel Method. By J. Dumas and Anne Carrel. New York: Paul B. Hoeber. 1917. Price, $1.25.

This little book gives a simple exposition of the details of the Carrel treatment of wounds, together with information on the staining of slides, counting of bacteria in wound secretions, and preparation and titration of the Carrel-Dakin solution. It is intended primarily as a nurse's handbook, but may be read with profit by surgeons and also by hospital superintendents and pharmacists working in institutions that use the Carrel method. L. E.

Diseases of Children: A Manual for Students and Practitioners. By George M. Tuttle and Phelps G. Hurford. Third Edition, Thoroughly Revised and Enlarged. Philadelphia and New York: Lea & Febiger. 1917.

This excellent manual is now in its third edition. Many new ideas and new clinical facts have been incorporated, making this book a very complete survey of the field of pediatrics. Especially to be commended are those chapters dealing with the development of the infant and the diseases of infancy and early childhood. The infectious diseases are presented in a clear and practical manner. Students of medicine will find this textbook a most valuable addition to their working library. R. L. A.

An Intermediate Text-Book of Physiological Chemistry With Experiments. By C. J. V. Pettibone. St. Louis, Mosby. 1917.

A clear, concise, little laboratory manual that should serve admirably to carry the student over from the elements of organic chemistry as given in the university into the realm of biochemistry. Step by step, the reader is carried along the path of logical deduction with a minimum of theorizing and a maximum of solid, proven facts. The student who follows this text-book faithfully will be well started to grasp the more complicated and more theoretical studies in the chemistry of living things. For the teacher conducting a course in physiological chemistry this manual will be a most excellent guide as to the order of instruction and for the students a great help in correlating lecture, experiment and text. G. H. T.

Handbook of Antiseptics. By H. D. Dakin and E. K. Dunham. New York: Macmillan. 1917. Price, $1.25.

This little handbook of 126 pages—it might be called a pocket-book—shows the hand of a master. It is of beautiful conciseness and simplicity,—always the mark of the best English scientists. It is full of useful information. The general introductory chapter on the laws of disinfection, the influence of media on disinfection and the choice of antiseptics especially, should be studied by everyone to whom modern antisepsis and the Carrel-Dakin methods are of interest. The antiseptics of the chlorine group—hypochlorous acid, chloramine T., etc., receive major consideration. The book contains contradictions. On pages 21-22 the combination of bleaching powder and boric acid (eusol) is said to be neutral or faintly acid; on the very next page we are told that it is alkaline to litmus. Nevertheless, military surgeons cannot afford not to study it. L. E.

Physical Exercises for Invalids and Convalescents. By Edward H. Ochsner. St. Louis: C. V. Mosby Co. 1917.

As the author says in his well-written introduction, he personally felt the need of an illustrated manual which the patient could use at home instead of typewritten slips. The forty illustrations are all good, but very few patients are willing to buy a book of this kind, much less to give the time to go through the above list. A physician can find the same exercises in any book on the subject and choose those suited to the needs of his patient. N. S.

State Society

IMPORTANT NOTICE—INDEMNITY DEFENSE FUND.

Notes are now becoming due.

Do not let your membership lapse.

Each member will be informed ten days in advance of the due date of his note.

Medical Defense Rules, Section 3: "Dues must be paid to the Secretary of the County Medical Society to which each member belongs prior to the end of February of each year. Any member whose dues are not paid prior to March 1st and whose name is not reported as having paid his dues by the Secretary of his County Medical Society is dropped from the list of members in good standing as of January 1st of such year, and such member is deprived of Medical Defense afforded by the State Society for the period from January 1st of such year to the date when his assessment is received by the State Society. Members whose assessments

are not received on or before February 15th of each year will be notified by letter from the Secretary of the State Society of such fact."

STATE DUES FOR 1918.

In order to defray the increased expenses of the Society due to its wider activities, and in response to the recommendations of the Council, the House of Delegates fixed the assessment for 1918 at $7.00, being an increase of $1.00 over the dues of last year.

COUNTY SECRETARIES TAKE NOTICE!

Kindly check the name of your President and Secretary appearing in the list of Presidents and Secretaries of the County Medical Societies on page xliv of this issue. Any corrections should be received by this office not later than the 10th of February to appear in the March number.

The initial assessment for the organization of the Indemnity Defense Fund was fixed at $30.00, one-half to be paid in cash upon subscription, and the balance by note due one year thereafter.

In fairness to those who joined the Fund promptly, it was necessary to fix a limit upon this method of payment, and therefore DECEMBER 31st, 1917, was settled upon as the LAST MATURITY DATE FOR NOTES.

Commencing January 1st, 1918, a member joining the Indemnity Defense Fund will pay the full initial assessment of $30.00.

THE FOLLOWING RESOLUTIONS WERE ADOPTED BY THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA AT ITS MEETING HELD NOVEMBER 24, 1917, IN LOS ANGELES:

RESOLUTION I.

Remission of dues of members while in the federal service during the war.

RESOLVED: That the Council of the Medical Society of the State of California recommends to each component County Society that the constitution and by-laws of each component County Society be amended forthwith to provide that any member thereof now in the service of the United States by reason of the war with Germany and Austria, or who shall hereafter join such service, and who is thereby absent from his practice in his own community shall be exempted from all dues of his component county society during the period of such service;

Be it further resolved, that each member thus exempted shall not be exempted from the payment of his dues to the State Society, but shall transmit such dues through his County Secretary, payable to the Secretary of the State Society.

RESOLUTION II.

Discipline of members for unethical conduct.

WHEREAS, the component County Societies have from time to time applied to the Council for advice and instructions in the matter of discipline of members;

AND WHEREAS, the Constitution and By-Laws of the Society upon the subject are as follows:

Constitution, Article III.

Section 1. This Society shall consist of Members, Delegates and Guests.

Section 2. Members—The Members of the Society shall be the members of the component county medical societies.

By-Laws, Article I. Membership.

Section 1. All members of affiliated County Medical Societies shall, by virtue of such membership, be members of this Society, when duly reported by the President and Secretary of the County Medical Society. The name of the physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be prima facie evidence of membership in this Society.

Section 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of its proceedings, nor receive its publications, until he has been relieved of such disability. Any person who may be suspended for non-payment of dues is to be construed as coming within the provisions of this section.

Section 3. It shall be the duty of the Secretary of each component society to furnish the Secretary of this Society, before the first day of February of each year, a list of all members in good standing (with addresses) on the first day of January of each year.

By-Laws, Article VIII. County Societies.

Section 5. Each County Society shall judge of the qualifications of its own members, but, as such societies are the only portals of this Society and to the American Medical Association, every reputable and legally registered physician who does not practice or claim to practice, nor lend his support to, any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any County Society, full and ample notice and opportunity shall be given to every physician in the county to become a member.

Section 6. Any physician who may feel aggrieved by the action of the society of this county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, and if the decision of the Council be questioned, an appeal shall be taken to the House of Delegates, whose decision in any case shall be final.

Section 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts; but in case of every appeal, both as a Board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

NOW, THEREFORE, BE IT RESOLVED: That the Council recommends to the component County Societies the following procedure for discipline of members in such cases of unethical conduct or practice as the respective County Societies may deem proper and suitable:

1. Private warning by the officers of the component County Society.

2. Reprimand by the President of a component County Society during open session or meeting.

3. Suspension for varying period, the duration of which to be determined by the component County Society or its constituted authorities.

4. Expulsion.

In cases 2, 3 and 4, due notice must be given to the member in question with full opportunity for him to be heard thereon.

Any of the foregoing disciplinary measures may be printed in the official publications of either the component County Societies or the State units.

County Societies

ALAMEDA COUNTY.

Annual Meeting.

The annual meeting of the Alameda County Medical Association was held Monday evening, December 17, 1917.

The meeting was called to order by the president, Dr. R. T. Stratton, and the following program was presented:

1. Spasmodic Disturbances of the Respiratory Tract With Special Reference to Hay Fever. Illustrated by Lantern Slides. Dr. Grant Selfridge, San Francisco.

2. Pelvic Anatomy of the Female. Illustrated by Lantern Slides in Natural Colors. Dr. David Hadden, Oakland.

Dr. T. C. McCleave exhibited slides of a case of tuberculosis of the upper dorsal spine with extreme deformity occurring in a few weeks from the time the trouble was first observed.

The following officers were elected to serve for the ensuing year: President, Dr. W. O. Smith; vice-president, Dr. W. H. Strietmann; secretary-treasurer, Dr. Elmer E. Brinckerhoff; councillors, Drs. F. H. Bowles, W. H. Irwin, T. C. McCleave, C. L. McVey, Pauline S. Nusbaumer and Dudley Smith; delegates to the State Meeting, Drs. A. S. Kelly, G. G. Reinle, A. M. Smith and R. T. Stratton.

The reports of the secretary-treasurer for the ear were read, after which the new officers were installed.

It was with profound sorrow that the members of the Alameda County Medical Association learned of the death of Mrs. F. M. Loomis, wife of Dr. Loomis, which occurred December 12th, last. Though Mrs. Loomis had lived in Oakland but a short time, she had endeared herself to a large circle of friends, who mourn her loss. To Dr. Loomis and the two young daughters, the Association extends sincere sympathy.

Dr. Alvin Powell, formerly on the staff of the University of California Infirmary, who was made Captain of the University Ambulance Unit, which was sent to Allentown, Pennsylvania, was last week promoted to a Majority.

Dr. A. M. Meads, of the University of California Infirmary, has been promoted to a Captaincy and it is rumored that he will soon leave Allentown to become urologist at one of the large New York base hospitals.

The Civil Service Board of the City of Oakland will hold an examination on February 25th, 1918, for the position of Director of Laboratories. The examination to be in subjects pertaining to Bacteriology and Chemistry. The salary will be from $150 to $175 per month.

The death rate in the city of Oakland, according to the Census Bureau, for the week ending December 15, 1917, was 6.1 per 1,000, which is the lowest in any city in the United States of over 100,000 population.

The following men were appointed by Adjutant-General A. J. Borree to serve on the Medical Board for doubtful draft cases in District No. 6 (comprising Stanislaus, Alameda, Contra Costa, Solano, Napa and Lake counties): A. W. Hoisholt, Napa; W. H. Strietmann, W. A. Clark, Alexander Galbraith, T. J. Clark, R. A. Glenn, P. S. Ansell and W. L. Hughes, Oakland. The Board Station to be at the Merritt Hospital, Oakland.

On the recommendation of the County Institution's Commission, Dr. A. M. Smith was appointed by the Board of Supervisors as temporary superintendent of the County Infirmary.

The dedication of the Arroyo Sanitarium, Alameda county's new tuberculosis hospital at Livermore, California, took place with appropriate ceremonies, at 2 o'clock, January 12, 1918.

The Health Department of the City of Alameda now has a Health Visitor to perform the usual duties of a Health and Municipal Nurse.

The resignation of Dr. C. A. Mackey, resident physician at the receiving hospital, Oakland, was accepted to take effect January 1st. Dr. Lee E. Smith was appointed in his place.

Dr. H. A. Wychoff was appointed resident physician at the Arroyo Sanitarium at Livermore.

Dr. William J. Jackson of Oakland, surgeon on the S. S. Tjikenbang has been commissioned an officer in the medical corps of the United States army and will return from China the first of the year to take up his duties. He is the brother of Doctor F. F. Jackson, Commissioner of Public Health and Safety of Oakland.

FRESNO COUNTY.

Dr. R. M. Jones, formerly in the Rowell Building, here, left for the M. O. T. C. at Ft. Riley, the morning of December 16th, last.

Dr. W. I. Adams, Forsyth Building, has been commissioned as Captain, M. R. C. U. S. A., and is daily expecting orders to join the colors.

The Board of Governors of the County Society have listed all doctors in the county who are eligible to examine the "conscripts" of the draft law, and are detailing them in turn, for duty as examiners. This scheme prevents abuse of the good-natured doctor and reaches the slacker members of the profession. It is working fine so far and all seem pleased with the plan.

Checks are coming in rapidly, which is very encouraging, since we must soon remit the Parent Society the tidy sum of $616, to keep us all in good grace with our "Alma Pater."

At the last moment comes word of the sudden illness of Chief Vollmer of Berkeley's police department, and a consequent cancellation of his engagement for January 8th. Prof. F. F. Nalder of the University of California has stepped into the breach, however, and promises to do his best to entertain us with a talk on "Crime and Its Causes."

To Members of Fresno County Society.

At its November meeting, the Fresno County Medical Society passed a resolution making the annual dues payable as follows:

The first Seven Dollars payable not later than January 31st, and the remaining Five Dollars not later than July 31st of each year.

Your County Society is compelled to remit $7 to the State Society at the beginning of the year, to maintain you in good standing, and protect you from fraudulent malpractice suits.

The practice of remitting for members regardless of their standing with the County Society is no longer permitted.

The Board of Governors deem this notice ample, and no further warning will be given.

SO REMEMBER TO MAIL YOUR CHECK TO THE SECRETARY THIS MONTH.

As the science of medicine is so extensive and the life of man too short to attain the whole, physicians of experience must be separated from the foolish, they must "purify themselves, make themselves white and be refined" (Daniel xii, 10), for by their constant study of literature and ceaseless investigation they distinguish themselves from the rest of mankind.

The physician does not bring about the cure, but he prepares and smoothes the way for nature; nature is the actual healer.

The need of the physician is twofold, preserving health and curing disease; and the demand for the former is greater than for the latter; for it is better for man that he avoid becoming ill than that he become ill and be cured.—Isaac Judaeus, 830-892 A. D.

LOS ANGELES COUNTY.

OUR HONOR ROLL

MEMBERS CALLED TO THE COLORS.

I. Roll of Members in Active Service.

Alexander, Chas. B.	Kellogg, P. S.
Alter, Samuel M.	Kerr, A. N.
Anderson, Oscar	Keyes, Henry
Bay, Samuel G.	Kyle, John J.
Blake, W. P.	Leonard, Walter
Blanchard, W. O.	Lockwood, Chas. D.
Boller, Phil.	Lynch, J. G.
Bonoff, Carl	Macleish, A. C.
Bowman, W. B.	Marxmiller, H. G.
Brem, Walter	McClish, C. L.
Brooks, S. D.	Miller, Frank W.
Burk, E. E.	Moore, E. C.
Byrnes, R. L.	Moore, Ross
Cahen, Caesar G.	Moore, Wm. Day
Carter, R. A.	Mordoff, C. E.
Chamberlin, H. H.	Morrison, Wayland
Charlton, A. T.	Morton, Lewis
Chase, Frank H.	Murrietta, A. J.
Cloud, M. M.	Olds, W. H.
Cochran, Guy	Orbison, T. J.
Condit, J. D.	O'Reilly, Thos. W.
Conroy, C. P.	Purviance, W. E.
Crispen, Egerton	Reed, W. A.
Crossan, J. W.	Remington, Lewis D.
Daniel, W. H.	Richardson, W. W.
Decker, C. W.	Roen, Paul
Dickson, A. R.	Shippey, R. H.
Dodsworth, R. M.	Shulman, Leon
Dwire, Francis B.	Sisson, C. E.
Evans, J. G.	Smith, Rea
Fahy, John Eugene	Stookey, Byron
Fairchild, F. D.	Tebbitt, R. L.
Ferbert, John C.	Tredway, E. E.
Fulton, Dudley	Waller, George P.
Irwin, J. C.	Warmer, C. A.
Josephs, Louis	Wiser, F. C.

II. Members Holding Commissions—Net Yet Called to the Colors.

Alden, Eliot	Koons, H. H.
Anderson, C. W.	Luckie, J. B.
Beach, Everett C.	Mace, L. R.
Bowen, Fred	Mattison, F. C. E.
Browning, C. C.	Pomeroy, J. L.
Butler, O. W.	Rand, C. W.
Coller, F. A.	Ray, F. S.
Dieterle, R.	Roberts, W. H.
Francis, W. V. C.	Shepard, C. A.
Fielding, G. A.	Sherk, H. H.
Frost, L. C.	Soiland, Albert
Hart, Lasher	Tholen, E. F.
Hill, R. B.	Van Kaathoven, J. J. A.
Hunter, G. G.	Whiting, Sandford
Jeffs, Milton D. W.	Wiley, E. H.
Jesberg, Simon	Wilson, H. P.
Johnson, C. A.	Woodward, Frank A.

Joint Medical Meeting.

The Southern California Medical Society had a joint session with the Los Angeles County Medical Association December 5, 1917. Dr. Orbison, a vice-president of the former, presided, commending the fellow feeling of the two Societies.

Dr. A. S. Granger spoke of the treatment of the diabetics in dispensaries; that the ambulatory cases should be instructed to make their own sugar and diacetic acid tests; should weigh their food and determine their sugar tolerance; that there should be more individualization in these cases.

Dr. R. S. Cummings reported one hundred cases of blood nitrogen in nephritis and spoke of the phthalein decrease in relation to the nitrogen increase and that the lessened output of phthalein meant death.

Dr. Molony spoke on the Medical Practice Act of California, saying that the annual tax and registration fee of two dollars to the Secretary-Treasurer of the Board of Medical Examiners, is to be partly spent for the prosecution of quacks.

Dr. Geo. H. Kress, in an animated talk, told of the necessity of action on the part of the profession, as the vote on the Enabling Act to amend the Constitution will take place at the next State election in November. Every one was surprised to learn that Social Health Insurance will be more needed because of the war when the boys come home from the trenches.

Los Angeles County Health Office Uses Motion Picture Film for Exhibit.

A very novel method of exhibiting the work of the Department has recently been adopted by the County Health Officer, Dr. J. L. Pomeroy, of Los Angeles county. In order to reach a large number of people with whom the Health Office never comes in contact, Dr. Pomeroy felt that a motion picture film was the best method to accomplish this purpose. Furthermore, the average citizen does not know very much about the mechanism or inner workings of the Health Department. As a result of this much misunderstanding and actual lack of co-operation results. The motion picture film has not only the advantage of reaching large numbers of people, but also the cost of transferring this exhibit is relatively so slight that this in itself comprises a great advantage.

The title of the film now in use in the County Health Office for exhibit purposes is "What the People Should Know." It portrays each step in the protection of the public against the spread of diphtheria, showing as nearly accurately as possible how employees of the Department carry on their work, and the immense amount of detail work which must be done on each case. All scenes were actually enacted by the members of the Department and their families.

The first scene shows the Health Officer in the central office studying the map of the county, with a record of the contagious cases before him. Later a case of diphtheria is reported, and in the succeeding scenes it comes to light that a neglected case of sore throat was in attendance at the public school and that the disease has been spread through the swapping of apples, through the pollution of the drinking fountain, and through the breaking of quarantine by a careless family; how the cultures are taken, examined in the laboratory, with the resulting administration of antitoxin is given in very interesting scenes. Then the careful work of examination of the school children, inspection of the dairy, the collection of infected books from the library, and all the many things which are done by the Health Department in compliance with the state regulations are portrayed with as much action as possible.

Throughout these scenes an attempt is made to convey to the public the great need of co-operation and good feeling between the citizen and the Health Department, and that most of the work carried out can only be successful if this co-operation is sincere and definite. A quarantine may easily be broken and the results of the work of an entire department be greatly hampered through a little carelessness.

This also shows that the work of the County Health Department covered a territory practically equal that of the State of Connecticut, being nearly four thousand square miles; that besides the rural territory, there were thirty-nine incorporated cities, a large proportion of the population of which daily was in contact with the rural population.

In the closing scenes of the film a special request is made for the co-operation of the people that a better understanding and greater efficiency be attained in this work.

Los Angeles County Hospital.

Los Angeles County Hospital service flag has just been received. It contains 27 stars. Those represented upon that flag are in all parts of the

United States. Some in France. All enjoying their work for Uncle Sam.

The Navy Base hospital unit of Los Angeles, in which there is a large number of doctors both from visiting and house staff, as well as nurses from the county hospital, left some time ago for duty at the front. Many of the doctors and nurses left behind are now getting anxious to be off and into the struggle.

With the beginning of the year some of the house staff at the hospital leave; all serviees change as new men come in. At present there are thirty internes; the serviee is eighteen months so ten internes leave and ten enter each six months. There is now a speeial service to which an interne is appointed, that of otolaryngology. It gives any interne espccially interested in this line an excellent opportunity for developing skill both in diagnosis and treatment as there is constant supervision by members of the visiting staff and a large amount of clinical material.

Medical Preparedness.

The Board of Trustees of the Medical Society of the State of California, and the Northern and Southern California sections of the medical division of the Council of National Defense, had an important eonference on medical preparedness for the war, November 24th, in the Los Angeles Athletie Club as guests of the "Uplifters."

Drs. Harry M. Sherman and Saxton Pope of San Francisco were the chairman and secretary of the Northern Division, and Dr. Henry Sherk of Pasadena and Dr. Geo. H. Kress of Los Angeles with the same offices for the Southern Division.

Dr. Clarence Moore of the Southern Section, made a report on the National Conference of the State Medical Division on National Defense just closed at Chicago.

Dr. Henry H. Sherk has received a eommission from Washington to supervise the examination work in connection with the next selective process and will be assisted by Dr. Geo. H. Kress.

Major A. Jump is to visit California on behalf of the Surgeon-General's Office. 600 commissioned California surgeons are reported to be now with the colors.

Dr. Claire W. Murphy, Coll. Med. Univ. of So. Calif., 1891 (C.), '92, member of the L. A. Co. Med. Ass'n., died here (L. A.), Nov. 24, 1917, at the age of forty-seven.

Dr. Theo. G. Finley died Dec. 17, 1917, at the age of 41. A. M. A., Univ. of So. Calif., '08 (C.), '08.

Los Angeles Physicians to Examine Registrants.

The Selection Boards of Los Angeles County will organize the physicians of the city and county to examine National Army registrants who are placed in class 1, the first to be drawn on for the new duty.

Captain Byron P. Stookey received orders from Washington detailing him to immediate duty with American troops somewherc in the war zone. Dr. Stookey has already served with the Allies for two ycars at Verdun. When he returned to Los Angeles he was appointed assistant surgeon at the reeeiving hospital by Chief Surgeon John P. Gilmer. Recently he was at Camp Kearny, near San Diego.

County Society Meeting in January.

The Los Angeles County Medical Association met January 3rd for the first time this year of 1918. Dr. William Duffield, the new president, having charge, exchanged eourtesies with last year's president, Dr. C. C. Browning, and remarked that he believed that his election was not meant so much to honor him as to have him do the work.

Dr. Browning spoke on chronic gingivitis and focal infection, the relation of tubercular trouble, of abseesses at the root of teeth, the need of the X-ray for diagnosis, and the importance of prophylaxis. The subject was illustratcd by some fine stcreopticon pictures made by Dr. Julio Endelman of the Dental College.

Dr. Alfred C. Reed, Editor of the California State Journal of Medicine, as a guest from San Francisco, was warmly welcomed, and as one of the speakers of the evening, dwelt on the importance of State Social Insurance. In a deliberate and effective appeal, he hopcd that every colleague would be fully informed about the matter, since it may vitally affect every one, and seems certain to become a law. He spoke fully and clearly about the Journal's policy, emphasizing the fact that its chief function is to develop the State Society and the county units.

Dr. Jno. Larrabee Pomeroy, Chief of the Los Angeles County Board of Health, says that 1100 feet of a motion picture film has been completed, illustrating the work of the county board of health in diphtheria, and will be shown in the motion picture houses for the people's education in this matter. Dr. Pomeroy wrote the scenario himself and had it run off for the Society's critieism. It was appreciated by all present, and highly approved by those who spoke.

Lieut. J. G. Lynch of the Medical Reserve Corps has been promoted to a captaincy for efficient servicc in passing upon applicants for army service. He enlisted before the declaration of war.

Southern California U. S. Naval Station.

Senior Surgeon S. S. Williams of the United States Publie Health Service, and Surgeon Warton W. Baker of the United States naval medical eorps, both of Washington, recently (Dec. 20) inspected the United States naval training station at Los Angeles Harbor, and eonsider the same an ideal training ground for large bodies of men; that the health of the men is excellent, due to arrangement of quarters, excellent medical service, the tonic breezes of the Pacifie, and the elimate of Southern California. Health eonditions at the naval training station of San Diego, they also found excellent.

Wanted: Deputy Health Officers.

The eounty civil serviee eommission called for assistants to the county health officers, December 26, and applicants are to be examined January 30, 1918, at the Hall of Reeords in Los Angeles.

Residents of the state are eligible. The duties of these deputy health officers are to enforce and observe sanitary measures and maintain quarantine regulations and rules preseribed by the state board of health. Salaries range from $150 to $175 a month.

The eligible list of the eounty hospital staff has been greatly lowered.

F. E. Doty, secretary of the commission, will aid applicants by mail if personal ealls are impossible.

For the Army Nurse Corps.

An army of 1,500,000 men nceds 37,509 nurses. There were only 3,800 enrolled December 29, 1917. As an increase of nearly 1,000 per cent. is needed some of the requirements for enrolling are being waived.

Compensation for Deaths and Injuries.

The Industrial Aecident Commission reported December 30, that during 1917, 657 workmen were killed in California. Medical, surgical and hospital payments amounted to $1,109,072.82, in addition for death and permanent injury cases, $2,398,232.01, were awarded, making a total in compensation and medical eosts $3,507,304.83.

County Society Meeting in December.

The year's last meeting of the Los Angeles County Medical Association took placc December 20, 1917. Dr. C. C. Browning presided. The seientific program was postponed because of the report of the many committees and the election of officers.

Dr. Geo. H. Kress spoke fully of the work done by the soeiety for its members and showed that

the many county and state unit benefits consume all fees.

Result of election: President, Dr. William Duffield; vice-president, Dr. Wm. H. Kiger; secretary-treasurer, Dr. Geo. H. Kress; councillors at large, Dr. Dudley Fulton, Dr. F. C. E. Mattison, Dr. George L. Cole.

MENDOCINO COUNTY.

Report made to the Mendocino County Medical Society at its December meeting:

Membership on January 1, 1917, 17; elected to membership during the year, 4, two of whom came with cards; removed from jurisdiction (Dr. Judson Liftchild), 1; died (Dr. George A. Woelffel, Willits), 1: total membership December, 1917, 19.

Members in Federal service: Dr. R. H. Hunt, Bartlett Springs, Lake county, Lieut. Naval Reserve Corps; Dr. H. H. Wolfe, Albion, Mendocino county, Lieut. Med. Reserve Corps.

Officers for 1918: President, Dr. G. W. Stout, Ukiah; vice-president, Dr. C. L. Sweet, Elk; secretary, Dr. O. H. Beckman, Fort Bragg; delegate, Dr. O. H. Beckman; associate editor, Dr. O. H. Beckman.

MONTEREY COUNTY.

Monterey county claims the honor of being the first county in the state to utilize its proceeds from the sale of the Red Cross Christmas Seals to employ a permanent visiting nurse. Miss Cecilia Jensen, a public health nurse with wide experience in tuberculosis nursing and health supervision of school children, has been appointed to fill the position.

ORANGE COUNTY.

The plan recently adopted at a joint meeting of the County Board of Education and the County Medical Society in reference to the routine examination of school children is meeting with fair success. Every pupil is given a card and asked to take it to its family physician and have it filled out. The filling out of the card necessitates that a physical examination be made. This examination, while not complete, covers most of the points necessary in the determination of diseased conditions among school children.

The paper on "Appendicitis" read by Dr. Robertson of Santa Ana at the last meeting of the society proved to be interesting and instructive and brought out a lively discussion.

Dr. V. C. Charleston of Brea has accepted a mining position in Arizona, and leaves shortly.

A committee was appointed by President Zaiser at the last meeting of the society to procure a service flag. It is expected that it will be unfurled at the next meeting.

Dr. W. H. Wickett of Anaheim is attending eastern clinics for the month of January.

PLACER COUNTY.

The regular meeting of the Placer County Medical Society convened at Roseville on the evening of December 1, 1917.

The annual election of officers resulted as follows: President, Dr. O. C. Hyde, Lincoln; vice-president, Dr. B. Woodbridge, Roseville; secretary-treasurer, Dr. R. E. Allen, Newcastle. Drs. Ostrom of Loomis and Miner of Colfax were elected as delegates to the next State Society meeting. Dr. C. J. Durand of Colfax was elected to membership in the society and Dr. J. B. Rogers of Napa was transferred to the Napa County Society.

On motion, the dues of the society were increased to $8.50 owing to the increase of the state fee from $6.00 to $7.00.

Resolutions of sympathy were passed and ordered sent to the family of Dr. John Jones, deceased, of Grass Valley. Dr. Jones was a man of high professional attainments and was beloved by all who knew him.

Dr. J. B. Harris of Sacramento presented three cases of anterior poliomyelitis, two of whom had been operated on with very gratifying results. Dr. Harris also talked upon obstetrical surgery in a practical and interesting way.

Dr. Ostrom of Loomis presented a paper on case histories.

Those present were Drs. Peers, Woodbridge, Ostrom, Hyde, Fletcher, Miner, Durand and Allen.

SACRAMENTO COUNTY.

At the regular meeting of the Sacramento County Society for Medical Improvement, held December 18, 1917, the following officers were elected: Board of directors for 1918—Drs. C. B. Jones, G. A. Foster, G. A. Briggs, George Spencer, W. A. Beattie. Officers for the year 1918: President, Dr. G. A. Briggs; vice-president, Dr. George Spencer; secretary-treasurer, Dr. W. A. Beattie.

SAN DIEGO COUNTY.

In order to handle the local situation a hospital for the isolation of patients afflicted with syphilis and gonorrhea is being erected near the Isolation Hospital, and will be ready to receive patients by January 1, 1918.

The San Diego profession to-day mourns the death of Dr. William D. Whitten, an internist of fine training, who died at Pottenger Sanitarium, Monrovia, December 5th.

The regular meeting of the County Medical Society was addressed by Dr. T. Coe Little on "Riggs Disease: Its Influence on Organic Nervous Diseases." The subject was clearly and forcefully presented and brought forth liberal discussion from both physicians and dentists.

The San Diego Diagnostic Group Clinic seems to be steadily broadening its sphere of contact, cases being constantly referred to it from outside states.

Dr. O. G. Wicherski has been elected by the Supervisors as county physician for 1918, vice Dr. I. D. Webster, resigned. Dr. Wicherski has been for several years doing good work as county health officer.

Dr. I. D. Webster is rapidly recovering from his recent serious illness and is able again to greet his host of friends.

The San Diego County Society held its annual banquet at the Maryland Hotel on the evening of January 8th and elected the following officers for 1918: President, Dr. James A. Jackson; vice-president, Dr. P. M. Carrington; Secretary-Treasurer, Dr. W. W. Crawford. Upwards of one hundred members of the medical profession enjoyed a delightful evening. After-dinner speaking was featured by informal talks from Lt. Mairresse, French aviator, and Dr. Arthur P. Lensman of Seattle.

In the untimely death of Dr. William D. Whitten at the age of 36 the San Diego profession has lost one of its most valued members. Dr. Whitten was one of the keenest clinicians and most enthusiastic workers in the local profession, interesting himself particularly in the active crusade against tuberculosis.

The San Diego Medical Library Association closed its third year of successful development with reports from its retiring officers and the election for 1918 of the following directors and officers: President, Dr. Thomas Coe Little; vice-president, Dr. James F. Churchill; treasurer, Dr. John C. Yates; secretary, Dr. Robert Pollock; directors, Drs. H. F. Andrews, F. R. Burnham, F. A. Burton, P. M. Carrington, James F. Churchill, James A. Jackson, J. E. Jennison, Lyell C. Kinney, H. P. Newman, Rawson J. Pickard, Thos. Coe Little and H. T. Woodward. Dr. Harry M. Sherman of San Francisco was elected to honorary membership in the Association.

Dr. Francis H. Mead and Dr. James F. Churchill

were recently elected to fill vacancies on the executive board of the staff of the San Diego Diagnostic Group Clinic.

SAN FRANCISCO COUNTY.

Proceedings of the San Francisco County Medical Society.

During the month of December, 1917, the following meetings were held:

Tuesday, December 4th—Section on Medicine.

1. Amebiasis Observed in California. Herbert Gunn.
2. Internal Secretions in the Practice of Obstetrics. Frederic M. Loomis, Oakland.
3. Opportunism in the Treatment of Epithelioma. D. W. Montgomery and George D. Culver.

Tuesday, December 11th—Annual Meeting.

The following officers were elected for 1918: President, John H. Graves; first vice-president, R. Knight Smith; second vice-president, W. W. Wymore; secretary, René Bine; librarian, Leo Eloesser.

Stanford Clinical Evening.

1. Skin Diseases in Their Relationship to Industrial Accident and Health Insurance. H. E. Alderson.
2. Traumatic Lipemia and Fat Embolism. John F. Cowan.
3. Cerebello-Pontine Angle Tumors (read by W. F. Schaller). T. G. Inman.

Tuesday, December 18th—Section on Surgery. San Francisco Polyclinic Clinical Evening.

1. Early Stages of Hydronephrosis. M. Krotoszyner.
2. Intermittent Claudication. H. Kronenberg.
3. Extra-Vesical Causes of Bladder Disturbances in Women. W. E. Stevens.
4. Local Versus General Anesthesia in Tonsillectomy. C. F. Welty.

SAN LUIS OBISPO COUNTY.

At a meeting of this society held December 29th, 1917, at the office of Dr. C. J. McGovern, San Luis Obispo, the following officers for the year 1918 were elected: Dr. A. H. Williams, president; Dr. B. Y. Miller, vice-president; Dr. G. L. Sobey, secretary-treasurer; Dr G. L. Sobey, delegate; Dr. R. A. Diesser, alternate.

SAN JOAQUIN COUNTY.

The annual business meeting of the San Joaquin County Medical Society was held at the office of the secretary Friday evening, December 28th. The following directors were elected to serve for 1918: Drs. F. P. Clark, J. D. Dameron, R. T. McGurk, B. J. Powell, L. Dozier, C. F. English, J. V. Craviotto, Margaret Smyth and D. R. Powell. Dr. Margaret Smyth was unanimously elected president, Dr. L. Dozier 1st vice-president, Dr. J. V. Craviotto 2nd vice-president, and Dr. Dewey R. Powell secretary-treasurer.

STANISLAUS COUNTY.

The annual meeting of the Stanislaus County Medical Association was held in the parlors of Hotel Modesto Friday evening, December 14th.

Preceding the meeting a dinner was given in the hotel dining-room.

Drs. Grant Selfridge, W. B. Coffey, J. H. Graves, and Prof. Thayer of San Francisco were present and read papers.

The officers elected for the ensuing year are as follows: President, Dr. E. F. Reamer, Modesto; vice-president, Dr. F. W. McKibbon, Oakdale; secretary-treasurer, Dr. F. R. DeLappe, Modesto; censors, Dr. S. W. Cartwright, Ceres (2 years); D. W. L. Wilson, Turlock (1 year).

Correspondence

SAN FRANCISCO COLLEGE OF PHYSICIANS AND SURGEONS.

December 17, 1917.

To the Editor:

On December 5, 1917, I accepted the position of Dean of the Medical Department of the College of Physicians and Surgeons of San Francisco, being vested with full power to make any change in the faculty or the conduct of the institution that I thought advisable; to install any apparatus or equipment that was necessary to properly carry on the work of the institution, or to make any other disposition of the institution that I thought advisable, providing such disposition took care of the students at present enrolled in the Medical Department, some sixty odd.

After a most careful consideration of the subject, I laid the matter before officials of the Medical Department of Stanford University and the University of California and offered to close the school forever if provision could be made by them in some way to provide for the students now enrolled in the school.

I received the most courteous consideration from these institutions, but unfortunately they could not see their way clear to undertake the task, even though the College of Physicians and Surgeons be temporarily completely reorganized and carry on most of the work to its close.

Just what course will be followed I cannot yet state. Unfortunately for the students, the element of time is all important as most of them are subject to the draft since the school was refused a Class B. rating by the Council of the A. M. A. and are being held only on temporary stays from the Draft Boards.

The position of many of these students is most pathetic and is deserving of serious consideration. The loss of time and money at this stage of their lives will be an irreparable blow to many.

The responsibility for the deplorable conditions existing in this Medical School rests as much with the State Board of Medical Examiners as with the management of the institution. The present predicament of the students arising from the draft could never have occurred had proper state laws been enforced.

Until the present time I have never been connected in any manner whatsoever with the College of Physicians and Surgeons. My attitude now in dealing with its affairs is that of an unbiased outsider.

Whatever is done by me in directing the work of this school will be done in the interest of the present enrolled students, taking carefully into consideration the obligations due to the community.

Yours very truly,

(Signed) HERBERT GUNN, M. D.

San Francisco.

January 3, 1918.

The Board of Trustees,
College of Physicians and Surgeons,
San Francisco, Calif.

Dear Sirs:

Since my appointment as Dean of the Medical Department of this institution on December 5, 1917, I have given most careful consideration to certain phases of its affairs with the object of effecting a reorganization of the medical school, which would meet with the approval of the authorities, and thereby permit the students now enrolled in the school to conclude their medical education.

After undertaking my work I soon became convinced that changes of a most radical nature were required, and that they would have to be accomplished in an incredibly short period of time in

order to stay the action of the War Department in taking a large number of the students in the draft. The prejudice of the medical profession against the College of Physicians and Surgeons is so deep-rooted that I found it impossible to obtain a staff of good men to fill the various departments under present conditions.

Stanford University, the University of California and Santa Clara University were appealed to, with the hope of developing some plan to care for the present enrolled students, but without avail.

One plan proposed entailed the carrying on of most of the medical work by the completely reorganized College of Physicians and Surgeons, the University acting as sponsor and filling in the gap with teachers where necessary; the College of Physicians and Surgeons to matriculate no new students and to close upon the graduation of the present classes. A reorganization of the staff under such sponsorship would have been a comparatively easy matter. Repeated endeavors in various other legitimate directions for support have also proved fruitless.

It has been suggested to continue the school, at least until the graduation of the present senior class, in the best manner possible, making as many beneficial changes as practicable under existing conditions.

I have given this plan of procedure most careful consideration, but I cannot see sufficient justification for carrying it out. In the first place, a considerable number of students will be lost in the draft, as no possibility of changing the rating of the College by the Council of the A. M. A. could be even remotely hoped for without most drastic changes being inaugurated, and no real benefit is to be expected if mediocre men are added to the staff or supplant men now occupying chairs. In the second place the students would gain but little by completing the year's work under present conditions and they could hope for but limited credit for work done here if they transfer to accepted schools, and if graduated from the institution in its present predicament it is questionable if it will be of any benefit to them.

It is my firm conviction that the ultimate interests of the students will be best served by the immediate discontinuance of the medical course, and an endeavor being made to provide for them in other ways.

While the students doubtless must share a part of the responsibility for their present unfortunate position for matriculating in a school widely advertised as of low rating, and, while, in my opinion, the State Board of Medical Examiners is culpable for not enforcing changes long ago which would have precluded the present entanglements, at the same time, you, as the trustees of this institution, are partly responsible. In view of your responsibility, I suggest that you aid these students in every way possible to enter other medical schools, or to get settled in other walks of life; that a material sum of money, at least as much as it would cost to carry on a year's work of the institution, be apportioned to the students according to the time they have spent in the school. Such financial assistance might make it possible for some of the students to continue their medical education elsewhere.

Very truly yours,

(Signed) HERBERT GUNN, M. D.

The letters above were submitted to the secretary of the State Board of Medical Examiners, who sends the following statement:

To the Editor:

The Special Committee of the Board of Medical Examiners, appointed for the purpose of investigating the College of Physicians and Surgeons of San Francisco, has made public its recommendations.

Until such time as an efficient Dean is selected by the Trustees, it would not be proper to discuss the affairs of the school with one who has been unsuccessful in rehabilitating the institution, or with one intolerant of constructive policies.

Respectfully yours,

CHARLES B. PINKHAM,
Secretary-Treasurer, State Board of Medical Examiners.

January 17, 1918.
San Francisco.

ORTHOPEDIC DUTY IN ENGLAND.

Alder Hey Hospital, Liverpool, Eng.

To the Editor:

Possibly your readers will be interested to hear about the work of the orthopedic men over here in the army.

The first contingent of 20 men crossed in May and was distributed in the English orthopedic hospitals. Baldwin went to Edinburgh, and is still there, doing good work. Abbott was at first in Edinburgh, but now is in London. The next contingent came in October and consisted of about 45 men, some of whom were experienced, but most were young men who must be trained for the work. McChesney went to France, I was sent here.

The whole orthopedic division in England is under Sir Robert Jones, the celebrated surgeon of Liverpool, and to him has been entrusted not only the reconstruction of the crippled men, but also the care and treatment of practically all injuries and diseases of the extremities, in the early as well as in the late stages, together with those injuries and diseases which heretofore have been considered to be in the domain of orthopedic surgery. He is constantly opening up new hospitals in England, Ireland, Scotland and Wales, and soon will have under his care about 15,000 beds. He is a man of remarkable skill and energy, and has the faculty of inspiring with enthusiasm those under him. Most of the Americans coming here are assigned to duty with him in the British Isles, and it is proposed to keep up a constant supply, so that, as some are trained in this new war work, they may be transferred to France and America, and others will take their place. Indeed, the need for training is great for us all, as the work is different from anything to which we have been accustomed, and we are compelled to work hard in order not to be found wanting. The demand for good men with surgical training is very great, and the opportunity is a wonderful one. Let me describe somewhat our hospital, Alder Hey, which is one of the largest, with its subsidiaries, and with Shepherd's Bush in London, one of the most celebrated.

Alder Hey is a modern collection of buildings, formerly a local government board hospital, which has been taken over by the government, and is situated about four miles from the center of Liverpool. It contains at present about 820 beds, and may be said to be the center of a group of hospitals constantly opening up in the vicinity. It is directly under the supervision of two Liverpool orthopedists, Armour and McMurray, two former assistants of Robert Jones, who have taken out captains' commissions in the British army. Under them are about eight men, British and Americans, each with two wards. The Americans as well as the others are under orders of the British surgeon-general. When we come, we spend a while observing and studying, and then gradually are fed into the machine. I began my work very shortly by taking over the wards of a man who was on vacation, then was given my own wards in Highfield, another hospital unit a mile away, which has been recently opened. This consists of 16 wards of 30 beds each, and with the exception of two wards, is in the charge of Americans. We have the privilege of calling on Captains Armour and McMurray for consultation, but we must shoulder

the responsibility. One of my wards is at present in immediate charge of a Canadian captain from a casualty clearing station, for the institution of the newer methods of wound treatment. Of these the most frequently employed are the Carrel treatment, and Rutherford Morrison's treatment with bismuth, iodoform and paraffine—"Bip." The results are astonishing, and are revolutionizing the treatment of compound fractures, and dirty old suppurating wounds of the soft parts. Instead of standing by and helplessly watching the patient fight it out with pus, we are enabled to interfere actively, and shorten the duration of the infection. With time, experience and a larger supply of assistants we hope to introduce these methods into the other wards. They require, of course, a larger staff, but from their time-saving attributes increase the "turn-over" of a hospital enormously. The Thomas knee splint, with its modifications has replaced practically all others in the treatment of fractures of the long bones.

Besides the treatment of those suppurating wounds a number of other things impress the newcomer. The first is, the great amount of nerve surgery. Where one sees one nerve operation at home, one sees 100 here. We have quite a remarkable nerve man to whom the patients are sent for localization and diagnosis of the lesion, and who calls the turn with great regularity. Then the nerve is sutured. The operation is rarely done until several months after the wound has closed, for fear of lighting up the old infection from the scar. To see some of these men dig out the nerve from the scar tissue is a beautiful thing, and then we all start in working on our anatomy. Any operation done at the site of the wound, within six months, is always preceded by a dose of tetanus antitoxin.

Another interesting branch of work is that upon tendons. These also must often be dug out of scar tissue, possibly enclosed in a fascia flap, and then sutured. Excisions of scars are frequent.

Bone grafting and ordinary open and closed fracture work come in for a large share of our attention. Functional disorders often simulate actual nerve lesions, and must receive their appropriate treatment. If any of us fancies abdominal surgery he will find a reasonable amount of that also.

The technic is different from ours, but has much that we might copy. Possibly there is less scrubbing of the hands before operation, but I should say that the fingers are less in the wound. The instrument nurse never touches the instruments, but handles them with forceps. No one may enter the operating room without a sterile gown, cap, mouth-guard and leggins which enclose the shoes and legs. This is in pleasing contrast to the somewhat free and easy customs of the visitor in our operating rooms. Military discipline prevails. We are under the direction of a lieutenant-colonel.

Two of our Americans are daily expecting transfer to other stations, and then our service probably will be doubled or trebled.

No one who comes over need fear that his ability will not be recognized. The opportunity is boundless. The difficulty is to measure up to our job, and to get away with the work that is offered us. We are treated generously, and are really right in the family. It is an experience that money could not buy before the war. If any of your readers with a good, modern surgical training wants a chance let them write to Major Elliott G. Brackett, Surgeon-General's Office, Washington, and make application. They would get a first lieutenant's commission, with a good prospect of promotion. Doubtless a man with chemical, bacteriological, or pathological leanings would find a chance to indulge his proclivities as a side line, to the advantage of himself, his associates and his patients. I have learned more in a few weeks than in a year. The enlarged view and the mental stimulus are not the least part of the work. No one seems in much of a hurry to go home. Our greatest loss possibly is the climate, but as most of the men are from the east, their loss is not considerable. As for me, I believe I should choose the Santa Clara Valley as a place of permanent residence. In any event we have not yet experienced the truth of Sherman's renowned saying. As a Frenchman once put it: "C'est magnifique, mais ce n'est pas la guerre."

Faithfully yours,

LEONARD W. ELY.

Military Medical News

CALIFORNIA PHYSICIANS IN NAVY MEDICAL SERVICE.

S: Surgeon.
P. A. S.: Passed Assistant Surgeon.
A. S.: Assistant Surgeon.
All U. S. N. R. F., except as marked U. S. N.
A. S.—Ainslie, C. A., U. S. N.
A. S.—Andrus, C. L., U. S. N.—San Diego Dist. Forces.
A. S.—Ashmore, F.—Headquarters, 12th N. Dist., Sheldon Bldg.
P. A. S.—Barnett, G. D.—Unit No. 2.
A. S.—Behlow, W. W., U. S. N.—Mare Island Navy Yard.
A. S.—Brown, C. E., U. S. N.
A. S.—Bryant, F. J.—417 Market St.
A. S.—Butler, E. W.—Unit No. 2.
P. A. S.—Barkan, H.
P. A. S.—Boardman, W. W.
P. A. S.—Boller, P.—Unit No. 3.
A. S.—Burke, E. E.—Unit No. 3.
A. S.—Baldwin, G.—N. R. T. C., San Pedro.
A. S.—Blake, W. P.—N. T. C., San Pedro.
A. S.—Brown, C. W.—Mare Island.
A. S.—Byrne, J. R., U. S. N.—Headquarters 12th N. Dist., Sheldon Bldg.
A. S.—Christiansen, R. C., U. S. N.—Mare Island.
A. S.—Connor, S. W.—N. T. Sta., San Francisco.
S.—Cochran, A.
P. A. S.—Charlton, A. T.—Unit No. 3.
P. A. S.—Clark, V. G.
P. A. S.—Cowan, J. R.—Unit No. 3.
P. A. S.—Cowan, J. F.
A. S.—Chamberlain, H. H.—Unit No. 2.
A. S.—Chamberlain, W. E.—Unit No. 2.
A. S.—Cohn, M. L.—N. R. T. C., San Pedro.
A. S.—Cook, E. P.—Mare Island Navy Yard.
A. S.—Corey, D., U. S. N.—U. S. S. Schurz, care P. M.
A. S.—Crosian, J. W.—Unit No. 3.
A. S.—Ducher, J. E.—Mare Island Navy Yard.
A. S.—Donnell, R. H.—Naval Air Station, San Diego.
A. S.—Dorn, N. F.—N. T. C., San Diego.
A. S.—Duncan, H. B.—417 Market St.
A. S.—Dunn, T. B.—Manila, P. I.
A. S.—Davis, B. P., U. S. N.—Mare Island Navy Yard.
A. S.—Dickson, A. R.—Unit No. 3.
A. S.—Fielder, R. L.—Mare Island Navy Yard.
S.—Frick, J. D.
P. A. S.—Fredericks D. D.
A. S.—Goetsch, A.—U. S. T. C., San Francisco.
A. S.—Goss, O. R.—Mare Island Navy Yard.
A. S.—Guinan, E. R., U. S. N.—Guam.
P. A. S.—Gilman, P. K.—Unit No. 2.
A. S.—Harman, B. M.—Mare Island Navy Yard.
A. S.—Herren, D.—U. S. N. Hosp., Las Animas, Colo.
A. S.—Holzberg, H. L.—N. T. S. T., San Francisco, Cal.
A. S.—Horner, R. W., U. S. N.—Unit No. 3.
A. S.—Hughes, F. A.—Mare Island Navy Yard.
S.—Hewlett, A. W.—Unit No. 2.
S.—Hill, H. P.

A. S.—Hammond, T. V.—Recruiting Sta., San Diego, Cal.
A. S.—Harvey, J. E., U. S. N.—N. T. C., San Pedro, Cal.
A. S.—Horner, W. D., U. S. N.—Unit No. 2.
A. S.—Hunt, R. H.—N. R. T. C., San Pedro, Cal.
P. A. S.—Inman, J. C.—Unit No. 2.
A. S.—Jacobs, Jay, U. S. N.—Naval Aux. Reserve, Ferry Bldg.
A. S.—Josephs, L.—Unit No. 3.
A. S.—Keene, W. P.—Marine Barracks, San Diego.
A. S.—Kris, R. E., U. S. N.—Mare Island Hospital.
A. S.—Krummes, H. P.—U. S. S. Gulfport.
A. S.—Lengenfelter, G. P.—Navy Recruiting Sta., Denver, Colo.
A. S.—Long, T. F.—Mare Island, Navy Yard.
A. S.—Lund, Leval—N. T. C., San Diego, Cal.
P. A. S.—Langnecker, H. I.—Unit No. 2.
A. S.—Linde, F. G.—Mare Island Navy Yard.
A. S.—Lorentz, R., Jr., U. S. N.
A. S.—Lundegaard, E. M.
A. S.—McCune, R. A.—Navy Recruiting Sta., Salt Lake.
P. A. S.—Miller, J. E.—Navy Recruiting Sta., Sacramento.
A. S.—Milligan, C. F.—Mare Island Navy Yard.
A. S.—Minaker, A. J.—N. T. S., San Francisco, Cal.
A. S.—Muller, Fredk. W.—N. T. C., San Diego, Cal.
P. A. S.—Morton, L. D.—Unit No. 3.
A. S.—McCarthy, F. J., U. S. N.
A. S.—McNab, J. R.
A. S.—McNulty, A. H.—N. T. S., San Francisco, Cal.
A. S.—Moore, J. R.
A. S.—Mullally, E. F., U. S. N.
A. S.—Miller, F. W.—Unit No. 3.
P. A. S.—McKee, A. B.
A. S.—Olds, W. H.—Unit No. 3.
A. S.—O'Neill, B. J.
A. S.—Owen, B. J.
A. S.—Parkin, V.—Unit No. 3.
A. S.—Pomeroy, E. S.—Mare Island Navy Yard.
A. S.—Price, M. J.—Mare Island Navy Yard.
A. S.—Pillmore, G. V.—Mare Island Navy Yard.
A. S.—Ragle, H. E.—N. T. S., San Francisco, Cal.
A. S.—Runner, J. F.—Mare Island Navy Yard.
A. S.—Rodenbaugh, F. H., U. S. N.—N. T. S., Pearl Harbor, T. H.
A. S.—Pruett, J. F., U. S. N.—U. S. S. Venetia.
A. S.—Reed, A. C.
A. S.—Reuling, J. R., U. S. N.—Mare Island Navy Yard.
A. S.—Ruddock, J. C., U. S. N.—Mare Island Navy Yard.
A. S.—Ryan, R. C.—N. R. T. C., San Pedro.
S.—Rixford, E.
P. A. S.—Richardson, W. W.
A. S.—Searles, H. H., U. S. N.—Mare Island Navy Yard.
A. S.—Sooy, D. W., U. S. N.—Mare Island Navy Yard.
A. S.—Spalding, O. B.—N. R. T. C., San Pedro.
A. S.—Stadtherr, E. F.—Mare Island Navy Yard.
A. S.—Schmidt, A. E., U. S. N.—Mare Island Navy Yard.
S.—Stillman, S.—Unit No. 2.
P. A. S.—Schaller, W. F.
A. S.—Saverin, A. E.—Mare Island Navy Yard.
A. S.—Schwartz, J. L.—Unit No. 3.
A. S.—Taylor, J. C. W.—U. S. S. Ajax.
A. S.—Teter, H. H.—Navy Recruiting Sta., Salt Lake.
P. A. S.—Tebbe, W. E.—Unit No. 2.
P. A. S.—Thorne, I. W.—Unit No. 2.
P. A. S.—Tupper, R. B.—Unit No. 2.
A. S.—Thomas, R. W.—U. S. S. Buffalo.
A. S.—Thompson, H. A.—N. R. T. C., San Diego, Cal.
A. S.—Viau, B. H.—Submarine Base, San Pedro.
A. S.—Visalli, J.—Mare Island Navy Yard.
P. A. S.—Voorhees, H. M.
A. S.—Wier, T. F.—Submarine Base, San Pedro, Cal.
P. A. S.—Williams, J. M.—Unit No. 2.
S.—Baker, M. W.—12th Naval Dist., Headquarters Room 405, Sheldon Bldg., San Francisco.
Castlehun, Paul—N. N. V.
Leland, T. B. W.—N. N. V.

WEEDING OUT INCOMPETENT OFFICERS.

Surgeon General of the Army, William C. Gorgas, has ordered that steps be taken for the climination from the service of all incompetent medical officers. In this category will be placed officers not fully qualified to perform their duties because of mental and physical incapacity, bad habits, or laziness. Officers assigned to duties that they can not competently perform because of unsuitable previous training, will be transferred and tried in other positions. If then unable to do satisfactory work, they will be reported to the Surgeon General as unfit and sent before a board with a view to their discharge from the service.

Recognizing that a proportion of medical officers are not fully qualified to perform their duties because of physical disability, mental incapacity, temperamental unfitness, laziness, inability to command men, lack of education or proper training, all division surgeons, commanding officers of base hospitals and other medical officers having subordinates are directed to list those whose work has not been satisfactory. If mental incapacity is suspected, psychological examinations will be given to determine the fact. Systematic instruction in military hospitals is recommended to remedy incompetency due to poor training in the technic of professional work. The medical officers' training camps are relied upon to correct deficiencies other than professional incapacity.

Medical officers who have been transferred will be given proper instruction in their new work and will not be discharged from the service until their superiors are convinced that they can not become competent within a reasonable time. No action for discharge will be taken until they have failed in two lines of work—viz., the professional care of the sick and disabled and medical field work, the latter including camp sanitation, handling of men, first aid and transportation of wounded.

NAVY CALLS FOR BINOCULARS.

The Navy is still in urgent need of binoculars, spy-glasses and telescopes. The use of the submarine has so changed naval warfare that more "eyes" are needed on every ship, in order that a constant and efficient lookout may be maintained. Sextants and chronometers are also urgently required.

Heretofore, the United States has been obliged to rely almost entirely upon foreign countries for its supply of such articles. These channels of supply are now closed, and as no stock is on hand in this country to meet the present emergency, it has become necessary to appeal to the patriotism of private owners, to furnish "eyes for the Navy."

Several weeks ago, an appeal was made through the daily press, resulting in the receipt of over

3,000 glasses of various kinds, the great majority of which has proven satisfactory for naval use. This number, however, is wholly insufficient, and the Navy needs many thousands more.

All articles should be securely tagged, giving the name and address of the donor, and forwarded by mail or express to the Honorable Franklin D. Roosevelt, Assistant Secretary of the Navy, care of Naval Observatory, Washington, D. C., so that they may be acknowledged by him.

Articles not suitable for naval use will be returned to the sender. Those accepted will be keyed, so that the name and address of the donor, will be permanently recorded at the Navy Department, and every effort will be made to return them, with added historic interest, at the termination of the war. It is, of course, impossible to guarantee them against damage or loss.

State Board of Medical Examiners

EXCERPTS FROM OPINIONS OF LEGAL DEPARTMENT.

Examiner for insurance company—not practising.

"An applicant has called at my office to obtain my opinion as to whether or not the occupation he is about to engage in requires a license to practice medicine within the State of California.

"The applicant is admitted to practice medicine in another state or states in the Union, but has not been admitted to California.

"He wants to act for a hospital association in both examining personally applicants for health and other matters of insurance and reporting to the company, and also in passing upon reports of other doctors who take examination in other places.

"The applicant does not intend to in any way treat the sick or afflicted, but simply to find out for the purposes of insurance as to whether or not they are sick or afflicted, or safe or dangerous risks. I do not feel that that requires any certificate.

"It is true it has been decided that the examination and diagnosis of disease are first steps in practicing medicine, but those cases were decided only when the practitioner went farther and prescribed or treated the patient. Consequently, I advise you that you may take the position that the applicant does not require a license for the work he professes to do."—(Excerpt from letter of Attorney to Board, April 10, 1913.)

Subdivision 12—unprofessional conduct—commission.

"The giving of a commission by a licentiate of the Board of Medical Examiners of this state could be legally construed as a violation of the provision of subdivision 12 of section 14 of the Medical Practice Act."—(Excerpt of letter of Attorney to Licentiate, February 5, 1916.)

Massage.

"Anyone in this state who diagnoses, treats, operates or prescribes for any disease, injury or deformity, is guilty of violating the Medical Practice Act, as may be more specifically noted from a reading of section 17 of the Medical Practice Act, which is enclosed herein; however, one may massage and not violate the law; i. e., if there is simply a rubbing of the body with no profession on the part of the rubber that the treatment will cure or aid an affliction or deformity, it is not a violation of the act. If, on the other hand, the manipulator or rubber pretends to cure, or assist in curing, or professes to remove the cause of disease, injury or deformity, etc., then it is a practice of a system, no matter what method may be used in such practice or treatment. In brief, any one who operates, diagnoses, treats, or prescribes, is practicing a system under this theory."—(Excerpt of letter of Attorney to Licentiate.)

New Members

McClelland, J. H., San Francisco.
Downes, Chas. S., San Francisco.
Sewall, Chester D., San Francisco.
Parker, Ashley S., Needles.
Jackson, James A., San Diego.
Bryan, Geo., Fullerton.
Slaughter, K. J., Folsom City.

Resigned

Mize, G. H., San Francisco.
Pratt, J. P., San Francisco.

Transferred

Rogers, J. B., Napa, from Placer Co.

Deaths

Benjamin, F. W., of Alameda, Cal.; Berkshire Med. Coll., '60, (C) '81; a veteran of the Civil War; died at his home, 2139 Buena Vista Ave., Dec. 23, 1917, aged 83.

Finley, Theodore Gawn, Los Angeles; University of Southern California, Los Angeles, 1908; a fellow of the American Medical Association; formerly assistant superintendent of the Los Angeles County Hospital; surgeon of the Los Angeles Gas and Electric Corporation; died at the Sisters' Hospital, Los Angeles, Dec. 17, 1917, aged 42.

Burns, Matilda Watson, died in San Francisco, Dec. 25, 1917, aged 64; cause, cerebral hemorrhage. She was a graduate of the Cooper Medical College and had practiced medicine and conducted a drug store in San Francisco for over thirty years.

Dow, Phineas K., of San Jose; St. Louis Med. Coll., '80, (C) '86; died Dec. 11, 1917, aged 82.

Mertzman, B. F.; Hahnemann Med. Coll., Philadelphia, Pa.; died in San Diego, Cal., July 23, 1916, aged 61.

Reed, William Boardman, M. D., Alhambra, Cal.; University of Pennsylvania, Phila., 1878; aged 75; formerly a Fellow of the American Medical Association; a veteran of the Civil War, and a well-known specialist on diseases of the digestive system; for many years a resident of Atlantic City, N. J.; at one time a member of the editorial staff of the Philadelphia Press; who went to California on account of ill-health in 1909, and suffered a cerebral hemorrhage in 1913; died at his home, October 31.—A. M. A. Jour., Dec. 1, 1917.

Claire, W. Murphy, M. D., Los Angeles; University of California, Los Angeles, 1891; aged 47; formerly a Fellow of the American Medical Association; a member of the Medical Society of the State of California; instructor in anatomy in his alma mater; died at his home, Nov. 24.—A. M. A. Jour., Dec. 15, 1917.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

Publication Committee:
E. C. FLEISCHNER, M. D. A. B. GROSSE, M. D. SOL HYMAN, M. D. GEORGE H. EVANS, M. D.

Advertising Committee:
R. E. BERING, M. D. THOS. E. SHUMATE, M. D.
Representative of the Council, E. N. EWER, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn .....
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin .....
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa .....
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. P. H. Reilly, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI MARCH, 1918 Number 3

PATHOLOGIC EXHIBIT.

The Program Committee has decided to provide space for an exhibit of pathologic specimens. Commercial exhibits are not to be included, but physicians having original models of instruments, or institutions having educational exhibits may apply for space.

Applications for space should be made to Dr. Alfred Baker Spalding, Lane Hospital, S. F.

COMMITTEE ON SCIENTIFIC PROGRAM.

To all Authors having place on the program of the State Society Meeting:

Please read the following very carefully and act upon the suggestions at once, as they are important, not only to the success of the program but to you, personally.

1st. If you will need the use of a projectoscope, moving picture machine or other equipment, kindly write at once, making known your needs. If you do not do this, do not blame the Committee of Arrangements or the Program Committee if you are not supplied when the Society meets.

2nd. Send us, as soon as possible, the name of the doctor whom you wish to open the discussion of your paper. Please do not delay; do it now.

3rd. A suggestion. In order to make the discussion of interest and value, a copy of your paper should be presented to the opener of the discussion of your paper not later than one week before the Society meets.

4th. VERY IMPORTANT. Your paper, when read, becomes the property of the Medical Society of the State of California and may be published or refused publication in the Journal, according as the judgment of the Publication Committee dictates. The rules require that your paper as read must be left with the Chairman of the Section before which it is read. The new ruling of the Committee requires that a copy of the paper which you will read must be in the hands of the Secretary before it is read at the Society meeting. Therefore, please bring with you an extra copy of your paper to be presented to the Secretary before you deliver your address.

DEL MONTE.

Every person who is expecting to attend the annual meeting at Del Monte on April 16, should make immediate reservation if he does not wish to court disappointment. The state society meeting is placed in the middle of the busy hotel season at Del Monte and rooms will be at a premium. There is every necessity for immediate reservation. Do it now. You can cancel a reservation if absolutely necessary later. You will probably be unable to secure accommodations toward the date of meeting. Railway rates are one and one-half the lowest regular one way fare, on the

receipt-certificate plan from all points in California, provided fifty (50) or more are in attendance. When you buy your ticket to go to Del Monte, pay the full fare and get a receipt-certificate. When you get to Del Monte, present this to the State Secretary to be signed and then when you get your return ticket, hand this receipt to the agent and he will give you a return ticket for one-half fare.

Do not fail to get the receipt-certificate, or to have it signed by the State Secretary, for if you do, you have no redress.

Every delegate should make it his first business to attend this session as matters of the utmost importance will come up for consideration. Questions have arisen in which every member of the Society is vitally interested and the delegates who represent large numbers of our members who cannot attend, should be sure to be present, even if at a personal sacrifice.

Secretaries of county units should make it their special duty to attend this meeting so that they may be in a position to explain to their members just what was done and why.

County secretaries can talk more effectively to their members on Society matters by having attended this meeting.

Hotel Rates: Hotel Rates are on the American plan.

Single room without bath, $5.50 per day, one person.

Double room without bath, $10.00 per day, two persons.

Single room with bath, $6.50 per day, one person.

Double room with bath, $12.00 per day, two persons.

GOOD ADVERTISING VALUE.

"That January issue is a 'cracker-jack.' Its sixty-six pages of live reading matter and fifty-two pages of live advertisements, all printed on a fine grade of paper, make it a notable issue. Looks as if CALIFORNIA STATE JOURNAL OF MEDICINE had started out with its January issue to make 1918 a banner year! Congratulations to the whole staff who made it, the readers who enjoy it, and the advertisers who profit by it."

That is what one of our advertisers thinks of the JOURNAL. It voices a fact which is sometimes overlooked, that the JOURNAL is one of the very best advertising media in the state for things which appeal to doctors and hospitals. Every advertiser gets more than value received. He gets an endorsement of quality and honesty. He gets publicity aside from actual sales resulting. And he gets the ear and eye of the doctors of the entire state in a direct and authoritative fashion. It pays to advertise in the JOURNAL. It pays to read over the advertisements. It is part of keeping up with medical progress. No doctor in the state of California can afford to be without the JOURNAL and no business house which wants patrons in the medical profession can afford not to advertise in the JOURNAL.

UNSCIENTIFIC SCIENCE.

The sober man of reason has the deepest respect for conviction in another man. He respects thoroughly the opinion, the precept and the practice of every other man who is actuated by a genuine belief in the right of his position and is sincere in his belief. We have no quarrel with those who have a reasoned and sincere belief in Christian Science. Their right is the same as our own to religious freedom. There enter two factors, however, which must be associated with this proposition. In the first place, we have a legitimate quarrel with those professors of Christian Science, however sincere they may be, who by their tenets or practices, endanger the health of others than themselves. In the second place, we have an obligation to explain whatever may have a bearing on this whole question, to the intent of clearing up misapprehension of its real point of view, teachings, and results, both within and without the ranks of its adherents. Exposition of its teachings and results in nowise is directed against the sincerity of those who are sincere, or against their religious conviction.

In the San Francisco Chronicle recently appeared a letter from a Christian Scientist, referring to the opposition on the part of his sect to the support of research medicine and thus incidentally, vivisection, by the American Red Cross. Says he: "The fact is, however, that medical opinion is hopelessly divided on this question, not a few of those most competent to judge being certain that animal experimentation in nowise promotes progress in medicine and surgery." This is news indeed! And even granting its truth, which we are very far from doing, why should any individual judgments be given weight against the clear record of fact in medical history? The medical profession for itself has urged particularly that the record of actual fact and accomplishment be considered in estimating the value of experimentation on animals, and not some one's judgment that this experimentation was valuable.

In this connection, attention is called to an announcement in the Journal A. M. A.[1] detailing a request for specific advice from General Pershing's medical staff in France, as to the desirability of such appropriation from Red Cross funds for medical research. The names of many of the signers of the reply are given, and are worth reading. It is absolutely and literally true that "any one endeavoring to stop the Red Cross from assisting in its humanitarian and humane desire to prevent American soldiers from being diseased, and protecting them by solving the peculiar new problems of disease, with which the army is confronted, is in reality giving aid and comfort to the enemy."

A recent Christian Science article states a fact with which we heartily agree, that "health is the normal condition of man . . . ," and then proceeds to the utterly unscientific and unrelated statement that "disease is a mistake of the human mind." It happened recently that the writer had the following experience: The husband of a follower of this sect lay ill, and on his refusal to have

[1] 1918, LXX, 3, 169.

a "practitioner," the doctor was summoned. The doctor was informed immediately upon his arrival that he was really the second choice and the lady told of her pet bull terrier which had been taken with distemper and given up to die by a leading veterinarian. In despair the lady called up a prominent "practitioner," whose writings by the way are often in the newspapers, and the dog was healed at once by a single absent treatment. Why not, therefore, change the definition of disease to "a mistake of the human *or* the canine mind"? And if canines can be slipped into the category, why not include all animals, and then all thinking things, and, rather than run afoul of modern biology, all things that show life? But if disease is to be limited to the thinking creature, how about disease in the insane or the idiotic or imbecile? Disease, one would think, must presuppose a mind. And without mind there could not be disease. Therefore to be without disease, one should first be without a mind. Perhaps this may be true, on a Christian Science basis. However, we prefer our science to be logical and to be based on something of reasonable scientific fact.

Another statement of the writer quoted above also meets with our approval. He is somewhat late in discovering it, to be sure, as it was written into medical and biological science some time ago and has been lately demonstrated in the laboratory (a vivisection laboratory, by the way) by Cannon and others. Says he: "It is very plain to the student of Christian Science that the direct effects of wrong thinking upon the body, such as the indulgence of malice, anger, hatred and revenge, cannot be healed either by drug or knife." "Drugging the poor innocent body to correct the effects of sinful thought is little else than trying to erase a shadow on the wall, without interfering with that which is responsible for the shadow." If there is no matter, how can there be a shadow? If the body is unsubstantial, so are the drugs, and where are we the worse off? By Christian Science reasoning, it would strike the impartial observer that drugs through their unsubstantial action on the unsubstantial body, might be expected to cause mental purgation, and emesis and all the other actions sometimes accredited to drugs. We find ourselves thus in the position of having proved some time ago what Christian Science now announces as a new discovery, and of rather refusing to follow logical Christian Science reasoning as applied to the metaphysical action of drugs.

Enough has been said to show that the basis of reasoning in this system is destroyed by its own reasoning, if it be logical, and that to apply the name "science" to such inconsistencies is most unscientific.

VENEREAL DISEASE AND THE ARMY.

Information recently received by the Bureau of Venereal Diseases of the State Board of Health shows that during the twelve weeks ending December 7, 1917, 21,742 new cases of venereal disease were reported from thirty-one cantonments. The incapacitation of these men involves not only loss of time. It has cost the government to keep them during the period of hospital confinement (varying from one to eight weeks), more money than is required to maintain the entire command at Camp Dix in New Jersey with 20,859 men, plus an additional sum for medical treatment. In hundreds of these cases the disease will relapse, in many instances, after the men have arrived in France and have presumably been put in condition for active service at the front, at a cost to the government of about $1500 for each man.

A large proportion of these cases of venereal disease originate, not in the camp or in communities surrounding the camp, but in cities and towns from which the men come and through which they pass en route to the camps. This statement is clearly proved by reports from the Surgeon-General's office. The enormous monetary cost due to venereal disease is thus due largely to conditions in civil life.

These facts show clearly the urgent need for an organized simultaneous attack by all states on venereal disease. When only a few states deal with the problem, and some of these but spasmodically, the result is only to drive the chief carriers, the prostitutes, from one state to another. State Boards of Health in each state should enlist the active co-operation of governors, mayors, chiefs of police, police judges, district and city attorneys, hospital superintendents, and educators, in an organized and general attack on venereal disease.

The special article in this issue by Dr. Sperry, on the campaign of the San Francisco Board of Health against venereal disease, is worthy of careful study. Such a campaign, related to and cooperating with the venereal disease bureau of the state Board of Health, is needed in every city of California where there is possibility of dissemination of venereal disease. Along with these campaigns, there is urgent need that the medical profession, as a whole, cease its indifference and *laissez faire* attitude toward this problem. Flippancy and cynical discussion are too often heard when the question of venereal disease is presented before medical societies. Both are in extremely bad taste and are neither rational at the present day nor patriotic. Let us have no more of them. That doctor who considers the entire subject a joke, is not fit to be a doctor. That doctor who is not a supporter of the government's policy of absolute repression of prostitution as the best solution of the question, so far as it affects carriers, is not conversant with present day sociological returns and needs to do some serious study of present day conditions. The medical profession should be in the front rank of the attack on venereal disease, both in its organized public capacity, and even more importantly in its individual relations to this great problem.

ALARMS AND RUMORS.

From time to time we hear that some member of our organization, who has been unfortunate enough to be sued for some alleged act of unskillfulness or neglectful omission, has suffered grievously at the hands of our organization. The story runs that the Secretary's office was indifferent or careless, or that our legal staff was ineffective and failed to respond to his dire need; or the yarn

may be that our finances are impaired, that members are not keeping up their dues, and more and much more of the same. Prefacing the statement "I heard" or "they say," our informant retails the depressing information.

May we without offense say to our members that the circulation of such alarms and rumors is opposed to the Society's best interests? It is, we believe, instituted by those who are opposed to the Society and who are wholly outside of the Society. There are evidences that a well-conducted and carefully planned campaign has been going on for some time. It is not instigated or maintained by any member of the Society, but members of the Society can aid it by lending unconscious assistance to the circulation of such statements. Such matters are calculated to disintegrate the Society's organization, to instill doubt and foreboding in the mind of every member as to the strength of the Society's organization, and particularly as to the efficacy of the legal defense measures used by the Society and its legal department.

The point is this: When you hear or see any statement, oral or written, critical or derogatory of your own officers and representatives, do not circulate it, but take it up, either by seeing or writing to the officer or representative criticized, and if not satisfied with his statement then take it to the Councillor for your district and ask him to look into the matter for you.

We scarcely think it necessary for us to say that there is not a particle of truth in such statements. Our organization was never in better condition. Our membership roll, taking the war into consideration, shows a healthy total. Our finances are in sound condition—our books are kept under the eye of a firm of certified public accountants. The report of our legal department for 1917 discloses nothing but an unbroken line of successful efforts for our members.

So we say, criticize your officers and representatives—yes, but do so on facts known to you, and then go to some one in authority. Make your officers and representatives suggestions, they like to get them; but don't aid in the spreading of any rumor designed to disintegrate or weaken our splendid organization—and that, in the possible and probable interest of influences desiring such a result.

MEDICAL MOBILIZATION.

Until the entire medical profession of the United States, so far as its members are mentally and physically fit and within the age limit, is mobilized in the Medical Reserve Corps of the Army, we cannot say that we have done our utmost as a profession in the German war. You may never be called, at the same time your joining the Medical Reserve Corps and placing your services at the command of your country, clearly indicates the patriotism which the medical profession, as a whole, should evince and which we must manifest if we are to win the war.

Every doctor must realize that success depends upon a carefully selected and thoroughly trained body of medical officers. By careful selection, we mean the placing of a medical officer in the position for which he is best fitted. Only by having the entire profession mobilized on a war basis, can we serve our country to the best possible advantage. This mobilization of the entire profession should come from within, but every physician coming within the requirements of the service, as to age and physical fitness, should seriously consider this suggestion and not wait for complete mobilization, but should apply at once for a commission in the Medical Reserve Corps of the Army.

It is not only for the combatant forces that medical officers are required but for sanitation, hospital camps, cantonments and in other departments where the health and life of the forces are dependent upon the medical officer. We have within the profession a sufficient number of doctors to fully meet the requirements of the Surgeon General's Office whatever they might be, but to be of service, you must join the Medical Reserve Corps to enable you to meet the appeal which is now being made for a large and efficient Medical Reserve Corps upon which the Surgeon General may draw as requirements demand.

WAR CLASSIFICATION OF MEDICAL COLLEGES.

Attention was called recently (Dec., 1917) to the situation arising in the College of Physicians and Surgeons in San Francisco, due to the fact that while this institution was accredited by the California State Board of Medical Examiners, it had failed to receive recognition from the War Department whereby its graduates could directly qualify for commissions in the medical corps of the Army, or its undergraduates be given recognition as medical students under the draft law. Inasmuch as the Class C. rating of this college has recently been confirmed by the Council on Education of the A. M. A., and inasmuch as the Army has not altered its dictum regarding recognition, there seems but one logical course for the State Board of Medical Examiners to pursue, under present war conditions, and for the best interests of the Army and of the students here enrolled. Certainly for the duration of the war the government minimum requirements of medical education should obtain for all colleges accredited by the State Board. As a war measure, no lower standard should be allowed. The demand of the Army for properly trained doctors should not lead to a lowering of the standard of medical education, but should be a powerful and patriotic motive for raising it.

NAVY NEEDS MEDICAL OFFICERS.

Considerable uncertainty appears to exist as to the status of the enrollment in the Naval Reserve Force, of registrants under the Selective Draft Law, since December 15, 1917. The following is quoted from the Selective Service Regulations operative from that date:

"(C) Any registrant at any time, regardless of classification and order number, may be commissioned in the Army, Navy, or Marine Corps, and thereafter, on presentation by the registrant to his local Board of a certificate of his Commanding Officer stating that he has been so commissioned,

such certificate shall be filed with the questionnaire and the registrant shall be placed in class V, on the ground that he is in the military or naval service of the United States."

As the Navy is still urgently in need of medical officers to answer the constantly increasing calls for sea and shore duty, particular attention is hereby called to the fact that registrants can present themselves for examination and accept commissions in the Navy regardless of their classification and order number, that the Navy is urgently in need of men, and that candidates found qualified will be assigned to immediate active duty if so desired.

Those candidates found qualified for enrollment and serving as interns will be, as far as practicable, left untouched in order to complete such course of internship. No definite assurance, however, can be given, as this action will necessarily largely depend upon the number of older men enrolled.

Applicants are requested to communicate with, or apply to, Dr. U. R. Webb, Senior Medical Examiner, U. S. Naval Hospital, Mare Island. California.

EDITORIAL COMMENT.

It is a pleasure to note that the monthly bulletin of the Federation of State Medical Boards of the United States for January, 1918, quotes in full the editorial entitled "A Bad Situation" which appeared in the December issue of the Journal.

In France and Germany the pharmaceutical corps is a necessary adjunct to the Medical Corps, and it is just as necessary to have qualified pharmacists in our own Army. The medical corps needs trained pharmacists. The soldier is entitled to the same protection against ignorant and careless dispensers that is afforded to civilians by the Pharmacy Laws.

You will remember an editorial published in the Journal of the American Medical Association as follows: "Today, as never before, victory in war goes to the nation that most effectively conserves the health of its fighting men. The physician is now of such military importance that the medical profession will be called on to make no inconsiderable sacrifices. It will materially lighten the arduous and responsibilities of the physician to have in the Army trained pharmacists who will be able to give intelligent cooperation. But it is imposing too great a strain on the patriotism of those whose special knowledge is obviously a large asset to the Army, to expect them to enlist as privates without any recognition of their national worth. Pharmacists should be given a rank commensurate with their importance, first because it is but simple justice to the pharmacists themselves, secondly, because the usefulness of the medical corps will be greatly augmented, and, lastly, and most important, because the efficiency of our Army demands it."

Any one in the Army Medical Service is now permitted to dispense drugs and medicines after he has been given a brief instruction in pharmacy, but the pharmacists who have served their time at home in studying, securing drug store experience and passing the State Board examination are not recognized by the United States Army as pharmacists. The medical profession should support the Edmonds Bill (H. R. 5531) for the establishment of a pharmaceutical corps.

In the new Journal of Psycho-Biology for September, 1917 (p. 141), K. S. Lashley records some interesting experiments on white rats with reference to the effects of strychnine and caffeine on habit formation. He finds that small doses of strychnine are without effect on the rate of habit formation, while doses large enough to produce tremor and incoordination accelerated learning. Caffeine in moderate and large doses, retards learning in direct proportion to the size of dose. Strychnine in large doses increases accuracy of performance of a perfected established habit. Large doses of caffeine caused more activity and reduced the accuracy of performance. Such data on elementary psychological responses to drug action are of particular value with those drugs which are, or may be, used for psychic stimulants.

The fight against tuberculosis has graduated from the moving-picture house and is about to appear in this country on the legitimate stage with Robert Edeson, of "Little Minister" and "Strongheart" fame, in the leading role. The play, entitled "Love Forbidden," is by Jacques Renaud and has had a seven-months' run in Paris. While this play is a pathologic drama like "Damaged Goods," which enjoyed such a phenomenal run a few years ago, it is declared by critics to be much more appealing and interesting as a piece of dramatic workmanship. It has been officially approved by the National Association for the Study and Prevention of Tuberculosis, which pronounces it a powerful agent for promoting the education of the public as to the menace of the great white plague and the methods of combating it.

It is astonishing how many manuscripts are received in which the verb "to operate" is employed as a transitive verb. Such use is incorrect and jars on the ear of good usage. The surgeon "operates upon the patient," but never, unless he is poorly lettered, "operates the patient." Moreover, the patient in the hands of the good surgeon should not "be operated," but should "be operated upon."

The special article in this issue by Dr. Gallwey brings up a matter of considerable importance and one which has not received the emphasis it deserves. This is the proper tabulation and record of the results of physical examinations under the draft law. Such results will be of real value, and proper means should be utilized in the coming examinations to make them full and reliable.

Oleomargarine is a worthy substitute for butter if a good brand is secured and it is fresh. It has nearly the same caloric value, is not unpleasant in taste, and costs about two-thirds as much as butter. It may not have the same vitamin content, but this is not a matter of importance in the ordinary dietary.

Special Articles

THE WORK OF THE MEDICAL ADVISORY BOARD FOR DISTRICT EXEMPTION BOARD, DIVISION ONE, NORTHERN CALIFORNIA.

By JOHN GALLWEY, M. D., San Francisco,
Medical Member Dist. Board, Cal.

On August 6, 1917, at the Capitol in Sacramento, a conference of the District Exemption Boards of California was held. The District Board of San Francisco and Alameda Counties was strongly of the opinion that re-examination of men claiming physical disability as a basis of appeal, should be provided for by the District Exemption Boards. For that purpose, in this district, a Medical Advisory Board of 15 members was appointed by Governor Stephens. Of this number there were 3 internists, 1 lung specialist, 2 general practitioners, 2 surgeons, 1 orthopedist, 1 alienist, 1 ear, nose and throat specialist, 2 eye specialists, 1 genito-urinary specialist, also 1 obstetrician whose duty it was to ascertain early pregnancy in wives of men who made this a basis of their claim of appeal. The laboratory and X-ray work was done largely at the St. Francis Hospital.

The board met daily except Sundays and legal holidays, serving from 10:00 A. M. to 4:00 P. M.; 574 cases were re-examined during a period of 4½ months, for the first draft. All of these, with a few exceptions, had been examined by local Boards of Examiners, and appealed to the District Board on claims of physical disability. The large number of appeals was ascertained to be due to the following reasons:

1. Dissatisfaction because of hurried examinations.
2. Imperfect knowledge of army physical requirements.
3. The noise and confusion in the examination room, and inability to take or weigh satisfactorily histories, especially in cases of nervous and mental diseases, and pulmonary tuberculosis.
4. The desire of medical men to conscientiously do their duty, and to fill the necessary quota, thus sending men who would be perfectly good in departments of the army, non-combatant in nature, but who proved not to be the perfect type of men sought for by medical examiners in mobilization camps.

Notwithstanding that the obviously disqualifying diseases, such as advanced tuberculosis, organic heart disease, deformities, defects in vision or hearing, under-weight or obesity and deficient height, were generally ruled out by local boards, the fact remains that a considerable number of such cases came before us, thus emphasizing the reasons for appeal from the decision of local boards, as above stated.

The method of examination consisted in taking, first of all, a careful history of each case as one would with a private patient. His complaint, upon which his claim of appeal was based, was fully written out. He was then stripped and subjected to a careful, general physical examination by two of the examiners. Frequently, disqualifying defects not complained of, and not even suspected by the subject, were discovered. Upon the detection of pulmonary, genito-urinary, nervous or spinal diseases, defects in sight or hearing, the subject was referred to the particular specialist for further investigation, and a report upon the findings. In all cases where the slightest suspicion developed, sputum and urine examinations were made. In every case an effort was made to obtain the man's point of view, and to satisfy him and ourselves with the thoroughness of the examination. A general consultation followed each day's work; difficult cases were discussed, and a decision rendered. Cases claiming tuberculosis of the lungs were subjected to a searching history and a physical examination. Where evidence was secured of a definite period of active tuberculosis, characterized by hemorrhage, positive sputum, loss of weight, cough, night sweats, even though in a state of arrest, the claimant was disqualified. X-ray plates were made where histories were questioned for some reason or not clear, and the physical examination inconclusive.

In cases of chronic bronchial asthma, where no definite physical signs were found at time of examination, we established a rule to disqualify upon receipt of an affidavit from the physician who had treated the subject during an attack.

Cases of heart murmur, apparently functional, were disqualified if the apex beat was found in an abnormal position, rhythm irregular, or tachycardia present, and when, as we frequently found, high blood pressure existed. In a number of these, urine examinations revealed chronic nephritis. In many cases a murmur was heard when at rest, and disappeared after exertion; in others no murmur could be detected at rest, but could be clearly brought out on exertion. When these murmurs were systolic, and no other abnormal symptoms were present, they were regarded as purely functional, and such subjects, consequently, were accepted. Due consideration was given the influence upon the heart's action produced by the nervous excitement attendant on the examination.

Cases of defective vision and hearing were examined by the specialists of the board.

The eye and ear examinations were conducted with extreme care, some of them requiring two or more visits in order to establish positive findings. Flat-foot, frequently claimed as a condition upon which a claim of appeal was based, was dealt with by ascertaining extent of deformity, degree of pronation, functional tests, and taking of imprints. Frequently the function of feet was found extremely good in spite of a decided degree of flat-foot. In such cases the subject was denied exemption.

Variations in height and weight were judged in accordance with the modified army regulations, which were adhered to closely, as we found that was the practice by medical examiners in mobilization camps.

Scars attendant upon surgical operations about the abdomen, and complained of as painful or interfering with function, even though no evidence of disability was found, were so frequently a cause for rejection at mobilization camps that we disqualified men for this reason. The cause of rejection in cantonments early proved to us that

none but a perfect physical type of man would be accepted on the first draft. Faulty union of fractures, ankylosis of joints, especially of right arm, disqualified, if interfering with the function of the limb.

Rejection for nervous diseases required probably more consideration than for any other cause. There were ten cases, apparently normal when examined, who were determined to have had psychosis, chiefly manic depressive in type. One brought a certificate of discharge from an asylum. Several brought affidavits from attending physicians certifying to the character and duration of mental symptoms, obviously mild instances, while the families of others were the only means of supporting the subject's story. In all these cases, carefully taken histories proved of the greatest value, revealing often family tendencies of insanity, epilepsy, and feeble-mindedness, indirect or collateral. Eleven cases of epilepsy were exempted on history and affidavit, or cross-examination of someone who had witnessed a convulsive seizure. Occasionally it was necessary to examine three or four people as witnesses, but in all cases where epilepsy alone was claimed, it proved to be possible to satisfy the examining board of its existence. Affidavits of physicians were, on the whole, very helpful, and there was very little evidence of any improper use of them.

The neurasthenic and psychasthenic cases were a problem, and in contrast to the undesirability of the manic depressives. The neurasthenics gave promise of much benefit, if not cure from the training. Those that were distinctly, but mildly, neurasthenic were accepted, and the depressed and psychasthenic type, as well as the hystero-neurasthenics, were rejected or given temporary exemption. Several of the mild manic depressives were provided by physicians with affidavits that they were neurasthenics. One homo-sexual was released for the good of the cause.

Of the 574 men re-examined, 55.4% were granted exemption, 7.8% were granted temporary exemption, and 36.7% were denied exemption.

Of the 318 rejections 275 were rejected on the diagnosis, after examination by the Board, which coincided with their claims. Of the remaining, 47 were rejected for other causes than those claimed. In all of these cases unsuspected conditions were uncovered as the result of the Board's examination. Of the 211 whose claims were denied 164 were found to be within the normal range, or to have made what was considered a normal recovery from their disability. The remainder numbering 47 complained of conditions not in the least disqualifying. Conditions which existed as described by them or expressly included in the Government regulations as not disqualifying. A tabulation of those variations that were within the normal range but might have been disqualifying is added.

The causes of rejection in the larger groups were as follows:

Pulmonary Tuberculosis	30
Epilepsy	11
Chronic Bronchial Asthma	15
Defective Vision	62
Flat Feet	22
Heart Affections	32
Nephritis	11
Joint Affections	14
Varicose Veins	5
Physically below normal	
{ Under weight	
{ " height	
{ Malnutrition	33
Defective Teeth	7
Bad Ears	17
Hernia	5
Spinal Diseases	7
Mental Disease	11
Obesity	5
Venereal Disease	9

The remainder represent many common conditions, such as furunculosis, hemorrhoids, rheumatism, skin affections, etc.

There were five malingerers. These were all men who wished to escape draft, and made a poor showing of any disqualifying conditions.

A tabulated list is appended covering all cases.

A result of medical re-examination was the rejection of men who would have been otherwise sent to a mobilization camp, there to be discharged, thus saving many from the hardship of loss of position or loss of a business. A second result was the saving to the government of the cost of transportation, feeding, housing and clothing men until their discharge from a mobilization camp.

In addition, many of the men examined who complained of minor troubles were advised to place themselves under the care of their regular physician for the treatment of the more serious affections which we discovered.

If we may gather anything of value from the work in connection with the first draft to guide us in our future efforts, it seems that endeavor should be made in the following directions:

1. To avoid haste in examination.
2. To become thoroughly familiar with physical requirements of the army.
3. To take histories and keep records of all cases.
4. To satisfy the drafted man by thoroughness of examination and kindly treatment.

It is regrettable that the vast amount of work accomplished by medical examiners during the first draft will prove of little value, statistically or otherwise, owing to lack of proper provision for taking and preserving of histories and records. Of course, the situation, entirely new and so great in scope as to reach every section of the country and all classes of the people, was precipitated so hurriedly as to render impossible gathering of medical data.

The value of the action of the conference of District Exemption Boards of California in providing for expert re-examination of cases appealing on grounds of physical disability, has been established by the action of the Federal authorities in redistricting the whole country and appointing special boards for each district to continue this work.

It is to be hoped that we may profit by our experience, and that the second draft examinations may be conducted with care and deliberation, and generally under such improved methods that the rich field about to be explored may yield a wealth of information which will, undoubtedly, prove of inestimable value in enabling us to attain a realiza-

tion of our ideal in medicine, the prevention of disease.

TABLE II.

DEFECT COMPLAINED OF BUT NOT DISQUALIFYING.

	Claimed as Primary Cause	Secondary	Total
Defective Vision	13	8	21
Defective Hearing	5		5
Defective Teeth	2	3	5
Throat and Nasal Trouble	5	6	11
Fallen Arches	7	11	18
Backache	2	2	4
Injury	15	7	22
Spinal Trouble	5		5
Physically Unfit	17		17
Underweight	2	1	3
Hernia	11	3	14
Neurasthenia	7	2	9
Torticollis		1	1
Fractured Skull	4		4
Enuresis	1		1
Moron	1		1
Epilepsy		1	1
Insanity		1	1
Vertigo	1		1
St. Vitus Dance	1		1
Tuberculosis	9	2	11
Asthma	1	1	2
Bronchitis		1	1
Varicocele	2		2
Kidney Disease	4	4	8
Syphilis	2		2
Chronic Urethritis	2		2
Undescended Testicle	1		1
Varicose Veins	2	1	3
Heart Trouble	18	2	20
Hemorrhoids	3	4	7
Chronic Rheumatism	2	6	8
Chronic Malaria	1		1
Mucous Colitis	1		1
Chronic Appendix	4	2	6
Post-Operative condition of Bowel	1	1	2
Fistula	3	1	4
Stomach Trouble	4	3	7
Failed to appear	2		2
Liver	1	2	3
Convalescence	1		1
Skin Disease		1	1
Pregnancy of Wife	2		2
Physically unfit	47		47
	211	78	289

There were 5 malingerers whose claims were as follows:

Blood Disease	1
Gonorrheal Rheumatism	1
Chronic Stomach Trouble and Rheumatism	1
Chronic Ear Disease	1
Crippled left leg, disease of Heart & Lungs	1
	5

REPORT OF MEDICAL ADVISORY BOARD ON MEN RE-EXAMINED ON PHYSICAL DISABILITY CLAIMS FOR DISTRICT BOARD, DIVISION ONE, NORTHERN CALIFORNIA.

TABLE I.

1. Number exempted	318
2. Number granted temporary exemption	45
3. Number denied exemption	211
Total	574

Causes of Rejection and Temporary Exemption.

Adenitis (cervical)	1
Adhesions (intestinal, p. o.)	1
Appendicitis (chronic)	2
Amputations (fingers, recent)	2
Arteriosclerosis	1
Arthritis (traumatic), 1 temp. ex	4
Asthma (chronic bronchial)	15
Atrophy (muscles left leg)	1
Bladder (post op. incontinence)	1
Bubonocele	1
Bronchitis, temp. exemp	1
Catarrh (nasal), temp. exemp	1
Cysts (prostatic)	1
Diabetes	2
Diarrhoea (chronic)	1
Epilepsy	11
Emphysema (pulmonary)	1
Ears, defective hearing	8
otitis media chr	9
Eyes, defective vision	62
Feet (injury to), 2 temp ex	2
(flat foot), 1 temp. ex	22
(deformity of)	4
Fistula (ano-rectal)	1
Fractures (with deformity), 1 temp. ex	4
(of skull, old)	3
Furunculosis, 2 temp. ex	2
Gastric Ulcer	2
Gonorrhoea, 5 temp. ex	5
Epulis	1
Heart (valvular lesions)	24
(tachycardia), 2 temp. ex	4
(muscular insufficiency, weak heart)	4
Varicose Veins (lower extremities), 1 temp. ex.	6
Hyperthyroidism	1
Hemorrhoids, 1 temp. ex	1
Hernia (inguinal), 1 temp. ex	4
(ventral)	1
Kidneys (chronic nephritis)	6
(stone)	1
(loss of one kidney)	2
Joints (ankles, deformed)	2
(ankylosis)	9
(injury), 2 temp. ex	3
Mastoiditis	1
Mental Disease	11
Mucous Colitis, 1 temp. ex	1
Nervous System (defective)	1
Neurasthenia	4
Obesity	5
Physically Unfit (malnutrition, 4 temp. ex	14
(underweight)	16
(underheight)	3
Pleuritis, 1 temp. ex	1
Phlebitis, 1 temp. ex	1
Paralysis (congenital, arms)	1
Rheumatism (chronic artic.)	1
Skin (acne, psoriasis), 2 temp. exemp	2
Sarcoma	1
Sex Abnormalities	1
Spine (curvature of)	7
Syphilis (active lesions)	4
Throat (sore throat), 2 temp. ex	2
Defective Teeth	7
Testes (orchitis), 3 temp. ex	4
Tuberculosis	30
Typhoid Convalescence	2

VENEREAL DISEASE CONTROL BY BOARD OF HEALTH OF SAN FRANCISCO.*

By JOHN A. SPERRY, M. D., San Francisco.

On August 10, 1917, Secretary of War Newton D. Baker communicated with the mayors of the cities and the sheriffs of the counties, in the neighborhood of all military camps, and said, in part:

"The War Department will not tolerate the existence of any restricted district within the effective radius of the camp. Experience has proved that such districts, in the vicinity of army camps, no matter how conducted, are, inevitably, attended by unhappy consequences. The only practical policy which presents itself in relation to this problem, is the policy of absolute repression; and I am confident that, in taking this course, the War Department has placed itself in line with the best thought and practise which modern police experience has developed. This policy involves, of course, constant vigilance on the part of the police, not only in eliminating regular houses of prostitution, but in checking the more or less clandestine class which

* Read before the San Francisco County Medical Society, January 15, 1918.

walks the streets and is apt to frequent lodging houses and hotels."

This, I think, is a clear expression of the attitude of the government toward the question under discussion. It may be interesting to give you some of the expressions and opinions of various men who have made life studies of the question of prostitution and the prevention of venereal diseases, before we take up the local situation.

Quoting from the introduction to the Report of the International Congress of Medicine, in London, August, 1913:

"The seventeenth International Medical Congress, held in London, in August, 1913, brought together 8,000 doctors, representing all civilized nations. A joint session of the Dermatology Section and the Forensic Medicine Section was held at the Albert Hall on August 9th to consider the question of 'Syphilis; Its Dangers to the Community and the Question of State Control.'

"The discussion was noteworthy for two reasons: First, because this great representative gathering of the medical profession was practically unanimous in admitting that the policy of regulation of prostitution is a hygienic failure and ought to be abandoned; second, because of the recognition by all the speakers that the question is one of great complexity, and that it cannot be solved by medical considerations alone.

"There was substantial agreement on the following points:

"1. That early and adequate treatment of the diseased is a most important means of prophylaxis and that there ought to be systematic provision for the diagnosis and treatment of all cases, without distinction of sex, station, or character.

"2. That there is urgent need for a fuller recognition by the medical profession and the public of the dangers of disease and of individual responsibility in regard to it.

"3. That side by side with these measures there must be others of an ethical and social character, including the suppression of commercialized vice, the protection of the young and the feeble-minded, and the inculcation of a higher moral standard.

"On other points there was considerable diversity of opinion, notably on the question of compulsory notification of disease."

Professor Blaschko, of Berlin, one of the foremost authorities in Europe, in his paper on "Syphilis, Its Dangers to the Community, and the Question of State Control," among other things, has this to say:

"In no country has regulation appreciably diminished sexual disease. The permanent diminution of disease in the English army since the abolition of the C. D. Acts has shown that this abolition has not had the effect of causing an increase in Great Britain; moreover, the Norwegian doctors, including those who formerly advocated regulation and who feared the worst results from its abolition in their country, are agreed that these results have not occurred."

"Several penal codes have special provisions in regard to actual or possible transmission of venereal disease. The laws of Oldenburg (1814, Art. 387), Denmark (1866, Sec. 181) and Norway (Sec. 155) punish a person suffering from venereal disease who indulges in sexual intercourse."

Professor Gaucher, who holds the principal chair of Syphilography, in Paris, in his address says: "I do not hesitate to declare publicly that regulation is iniquitous, illegal, inefficacious and positively harmful."

Flexner, who has been two years in Europe, at the instance of the Bureau of Social Hygiene of New York City, for the purpose of studying prostitution in Europe, says "that segregated districts, in which prostitutes are confined, exist nowhere in Europe, and are nowhere considered desirable or feasible."

The casual observer does not stop to consider what the money cost of prostitution is. Dr. Rosenstirn tells me that there were fifteen hundred prostitutes registered in the Municipal Clinic during its existence. The conservative estimate of the gross earnings per week, per woman, is $50. This means $300,000 per month; or $3,600,000 per year, in San Francisco, as the initial cost of commercialized prostitution in as far as the woman herself is concerned; to say nothing of the large amount spent on alcohol, which is the important adjunct and the one factor above all others which keeps alive the system. This applies to commercialized vice alone and does not touch the clandestine class which is, also, a large item.

Loesch estimates that between three hundred and five hundred million marks are spent in prostitution in Germany yearly. The entire educational system, including universities, secondary schools, elementary schools, technical and professional institutions cost in 1909 something less than two hundred million marks.

These figures are not used for argument, but as a matter of interest to those who have given the subject casual consideration.

The present work in connection with venereal diseases in San Francisco, began as a result of the handling of the question by the State Council of Defense, under the authority of the Council of National Defense. They, in turn, communicated with the County Councils of Defense; and thus it was brought to the attention of each county. A preliminary meeting was held in San Francisco, Dr. Sawyer, Secretary of the State Board of Health and Dr. Hassler, City Health Officer, being present. At this time it was suggested that the State be divided into three sections; one south of the Tehachapi; one central in Sacramento; and one coast section, with meetings to be held in San Francisco; the personnel of these meetings to consist of the Health Officers of the cities in the counties, the County Health Officer, the Sheriff of the county, Chief of Police of a city, the District Attorney, the Mayor and the Supervisors, if the same could attend, and representatives from the Army and Navy.

It was recommended to Governor Stephens on August 13th by the Military Welfare Commission that a Bureau of Venereal Diseases be established under the State Board of Health and that $60,000 be appropriated from war emergency funds for its support during the next two years. The delegation which laid the plan before the Governor included Mr. Warren Olney, Jr., and Dr. Milbark Johnson of the State Military Welfare Commission. Colonel Lynch of the United States Army, Lieutenant James E. Miller of the United States Navy, and Drs. George E. Ebright and Wilbur A. Sawyer of the State Board of Health. The plan met with the hearty approval of the Governor and work has been begun.

At the conference held in San Francisco the Mayor and Supervisors assured the State, Army and Navy authorities that this city would immediately begin work of suppression of prostitution

and that they would establish a special venereal ward in the San Francisco Hospital. The Health Officer was authorized to inform the Board of Health that they should immediately proceed with this plan. The Chief of Police appointed a special moral squad to work with Army and Navy authorities in apprehending women engaged in prostitution.

During the latter part of August, 1917, active measures were begun. The Police Department appointed Lieutenant Goff as chief of the morals squad, and gave him orders to suppress all houses of prostitution, to arrest all street walkers or others found soliciting on the streets, and to bring all women arrested on charges involving prostitution before examining physicians of the Board of Health for the purpose of determining whether they were venereally diseased.

As above mentioned a ward was set aside in the San Francisco Hospital where cases needing treatment were confined and kept until deemed non-infectious. In the beginning Dr. O'Neill, City Physician, was burdened with this work in addition to his regular duties. It was soon found that it would be necessary to have one man devote all his time to the work.

I undertook it on the first of October, 1917, for the months of October and November. After numerous conferences at which were present Dr. Hassler, Dr. Brodrick, Dr. Sawyer, Dr. Irvine, members of the Board of Health, representatives from the Army and others interested in the subject, the following regulations were agreed upon and put into force:

1. All acute clinical cases, i. e., cases showing evidences of open lesions either of gonorrhea, syphilis or chancroid, and all cases of gonorrhea which do not show the acute clinical lesion but in which the laboratory findings are positive for gonococci shall be immediately sent to the San Francisco Hospital for official isolation, care and treatment. No deviation from this rule shall be permitted excepting upon the approval of the Health Officer.

2. Cases showing no acute lesions shall be treated as follows:

(a) Syphilis. These cases in which laboratory findings show positive Wassermanns may receive treatment at the hands of a reputable private physician or clinic approved by the Health Department, provided the necessary form of agreement shall be properly signed by both patient and attending physician or clinic.

(b) Cases which are under the care of a private physician, or clinic, as set forth in "a" shall be required to report in person to the examining physician of the Health Department within four days after signing the above agreement, bringing a written report from the attending physician stating the treatment administered, and thereafter once each month or oftener if required. Before such patient shall be finally discharged as cured, the final examination and approval of the examining physician of the Health Department must be secured.

(Note: All blood tests upon which the evidence of discharge shall be based must be made in the laboratory of the Department of Health.)

(c) Patients suffering from syphilis who are unable to, or do not, secure the services of a private physician or clinic, and any case which refuses to conform to these regulations shall be subject to quarantine and treatment at the discretion of the Health Officer or his official representative.

An effort was made, as far as possible, to treat the infectious cases in the San Francisco Hospital until they were germ-free on two or more consecutive examinations; or if they were syphilitic, until the danger of communicating the infection was past. In addition, when these patients left the hospital, they were required to sign an agreement by which they were to report to the examining physician of the Board of Health within four days after leaving the hospital; to place themselves under the care of a private physician, or clinic, for further treatment, and agree to discontinue the practice of prostitution while under the control of the Board of Health. Later the courts asked that they be returned to them and they were let out on probation while under the control of the Board of Health.

A card index system was instituted; and cards such as these were used. As soon as disease was found in any individual, it was indicated on the card by a small red metal tag being attached to the top thereof, thus making the diseased individual easily identified.

During the month of October a very lenient attitude was taken by the Police Court in regard to the repressive measures; no fines or jail sentences being imposed, except in the last day or two of the month, when a new regime was about to be inaugurated. Some women were arrested as many as three or four times in one night, and if not diseased were always dismissed. Repression at this time was a joke.

During this month there were 497 women defendants in the Women's Court, of whom 390 were arrested on charges involving prostitution. Bail in these cases was nominal; usually being fixed at $5.00. Under this system about 20 per cent. of those women ordered to appear before the Board of Health for examination failed to do so. It is reasonable to believe that the women who were diseased, and who realized that fact, were probably the ones who jumped the $5.00 bail, and took themselves with their disease to other localities.

In the latter part of October another conference was held for the purpose of trying to devise means by which this avoidance of examination could be remedied. Two of the police judges were present. The following recommendations growing out of this meeting were presented to the police judges and subscribed to by all of them:

1. That all persons arrested for the first time on charges of vagrancy, prostitution, etc., shall be placed under a bail of $1000.00 for the reason that our records show upward of 20 per cent. of these cases if put on a small bail fail to report to the court and leave town or change their residence and remain free for some time and the small bail is forfeited. Further that it is our opinion, based on experience, that these are in all probability infected individuals desirous of escaping examination.

2. Any individual proven diseased, who has been allowed liberty after arrest and again found practicing prostitution, shall be put under a heavy bail on her subsequent arrest in order to allow the Medical Examiner to present evidence in court to the end that the case may be properly dealt with.

3. All syphilities allowed treatment by private physicians, who fail to comply with the regulations and agreements and continue the practice of prostitution shall be considered a public menace and

when re-arrested, we recommend shall receive light jail sentences.

4. All cases of gonorrhea which have been paroled following treatment at the San Francisco Hospital or allowed liberty while under the care of a private physician and who have not received final discharge from the Department of Health, if caught practicing prostitution, we recommend shall receive severe punishment, as we feel these cases are a particular menace to the community.

About this time the Government sent a representative to the police judges strenuously urging that they adopt strong repressive measures, imposing, if necessary, jail sentences on all offenders, the end in view being to close the houses of prostitution and drive the street walkers off the streets.

The Government's insistance was so strong that the police judges agreed to enter into an active campaign of repression. In the beginning of November active repressive measures were inaugurated together with the high bail for all new cases and those re-arrested who had broken their agreements. During November a number of women who were persistent offenders, and others who were found with sailors and soldiers were sent to the county jail for terms varying from twenty days to six months.

At the same time rehabilitation measures were inaugurated and in nearly all instances of first arrest suspended sentences were given, provided the individuals agreed to adopt some form of legitimate work and report regularly to the rehabilitation officer, who secured positions for them.

During November seven girls found homes and respectable employment through Mrs. Evans of the Y. W. C. A. who is conducting as best she can a rehabilitation bureau. Mrs. Evans is doing splendid work in this direction, but she has not the time nor funds at her disposal to accomplish in full what can be done. I believe there is an urgent necessity for the further equipment and organization of this part of the work. There are a certain number of these unfortunates who will with some encouragement be only too glad to escape from their surroundings. This number is small but by all means worth helping.

It is interesting to note that in November as a result of strong repressive measures there were only 172 women defendants arrested on charges involving prostitution, as against 390 in October when repressive measures were not enforced.

All women arrested for the first time on charges of prostitution were turned over to the Health Department for examination. Those unable to give bail were held in the city prison until the afternoon when they were sent to the examining officers of the Board of Health, located in the city jail No. 2. Those allowed out on bail were instructed to report at a given hour at the same place. A careful smear was made from the Bartholin glands, meatus, and the cervix. These examinations for gonorrhea were repeated every week if the woman was re-arrested in that time. Wassermann tests were made from each new patient and repeated every three months if again arrested after the lapse of that time. Women taking private treatment were compelled to take treatment for three months before the second Wassermann was taken.

In October, 1917, 145 new cases were examined and sixty-seven re-examinations were made, making a total for that month of 212 examinations. About twenty per cent. ordered to report for examination failed to do so. Had they all reported the approximate numbers of examinations for the month would have been about 260.

In November, after repression was inaugurated, there were 94 new cases examined as compared with 145 in October, and fifteen old cases re-examined as compared with sixty-seven in October. A total number of 109 examinations in November as against 260 ordered to report for examination in October. Under the new high bail order all cases without exception reported in November. Thus we see that repression reduced the figures in one month from 260 ordered for examination in the previous month to 109 examined in the month after repression was inaugurated.

Forty cases were sent to the hospital in October and twenty-one in November. Out of the 239 new cases examined in October and November, thirty-two had gonorrhea, sixty-five showed positive Wassermanns, and fifteen had both gonorrhea and positive Wassermanns. Thus laboratory evidence of disease was found in 112 out of 239 examined or 45.9 per cent. Forty-seven showed active gonorrhea, a percentage of 19.2 per cent. Most of these were chronic cases, it being rare to find an acute gonorrhea. There were a large number with pus or muco-purulent discharges from the Bartholin or Skenes glands in which in spite of repeated examinations no gonococci were found. No record was kept unfortunately of the number of cases in which healed lesions or evidence of quiescent gonorrhea was found, such as scars of old abscesses, indurated, enlarged and cystic Bartholin glands etc. but I think a conservative estimate would fix the number of cases showing such evidence of old infection at fully 80 per cent.

On re-examination gonorrhea was found in four cases at the second examination, and three cases at the third examination. These were all chronic cases, apparently not acquiring their infection between examinations. These seven cases were not included in the percentages above, as they are the result of eighty-two re-examinations, many of the women being examined as many as four times in four weeks. These seven cases added to the forty-seven found on the first examination brought the total number of cases of gonorrhea encountered up to fifty-four. Of these fifty-four cases gonococci were found in the cervix, in thirty-two instances an incidence of 57.6 per cent. of cervical infections, in the meatus in eighteen cases an incidence of 32.4 per cent; in the Bartholin glands, in eight cases an incidence of 14.6 per cent. In eleven cases slides were positive from two foci an incidence of 19.8 per cent. in more than one focus.

Small cotton swabs were used in making smears in preference to a platinum loop. In the cervical examinations swabs were introduced into the cervical canal about one-half inch and turned several times to swab off mucus deposits and thus come in contact with the deeper layers of the mucosa.

Dr. Agnes Walker of the City Board of Health

Laboratory did all the laboratory work in October. In November a bacteriologist was present in the examining room every afternoon and examined the smears as they were made Dr. Walker continuing to do the Wassermanns.

In the 239 new cases for the two months eighty showed positive Wassermann or Gradwohl reactions a percentage of 32.8. Of these 25.8 per cent. were xxx; 4.1 per cent. were xx, and 2.8 per cent. were x. Only one case showed skin lesions and one case a suggestive throat lesion. The case showing the skin lesions had taken salvarsan and mercury; the lesions were rapidly disappearing and her Wassermann was negative. The physical examinations had necessarily to be casual and consisted for the most part in the inspection of the genitalia, mouth and throat and, in suspicious cases, looking for lesions on the body.

Many of the women gave voluntary information of having received syphilitic treatment previously. In most of these the Wassermann was negative.

I think that the rarity of the open lesion and the comparatively small number of active gonorrheas are due to several factors; first the great majority engaged in prostitution acquire their infection at an early age, while they are more or less clandestine in their activities; by the time they engage in open commercialized prostitution they have taken active treatment and the open lesion and active manifestation of disease have disappeared. This is borne out by statistics gathered from the regulated clinics in Munich, by Flexner. Of 2686 clendestine prostitutes arrested and examined there, 711 were found diseased. Of these 326 or over 50 per cent. were minors. Out of eighty-eight cases of minors under eighteen years of age arrested on charges of clandestine prostitution, 55 per cent. of those of fifteen years of age were infected; 61 per cent. of those sixteen years old; aand 67 per cent. of those seventeen years old. Numerous statistics gathered from other clinics show about the same result. I think also another reason is that most of the lower types of prostitutes who are more liable to infection have been driven out of the business in this locality at least. During the two months not a single chancroidal infection was observed. All took douches who had opportunity to prepare themselves against examination.

In regard to the effect of suppressive measures the time has been too short to draw definite conclusion. I am told by Lieutenant Goff that soliciting on the streets is comparatively rare. From the arrests made in November I can corroborate this, as during that month very few of the habitual street walkers, who were so numerous in October, were arrested.

I know that the results of the campaign have also been shown in the records of the Army and Navy Stations in this district, there being a marked decrease of new cases of venereal disease admitted from this district and a decrease in the number of prophylactic treatments given to almost 50 per cent., showing that there have been fewer exposures. That there is urgent need for venereal prophylaxis in our armies is unquestionably true. Dr. Finney, who is in charge of the whole surgical service of the American Army in France, in a recent communication, states that venereal disease among the troops is the biggest health problem that we have to face. Dr. Wm. H. Welch of Baltimore, who returned from the fighting front a year ago, said in a speech in Baltimore that the ravages of gonorrhea and syphilis among the troops was frightful and almost unbelievable. There are instances reported of more than 30 per cent. of certain units in training being rendered unfit before they reach the fighting line. Venereal disease in Paris has increased to 30 per cent. in the civilian population, according to Gaucher. It was stated, by good authority, at one of the conferences held in regard to this subject that up to October of last year 1,200,000 French soldiers had been diseased.

I shall not attempt to enter upon a discussion of the moral side of this question, the object of this paper being to put before you the measures being taken by the city for the control and prevention of venereal disease. I think it would be well for us to realize that the present measures are war measures; that this attempt to control venereal infection is not the sporadic outburst of overenthusiastic reformers, but the well thought out plan of the government of a nation at war, applied alike to all sections of the country where there are encampments. That the Government has adopted these plans only after due investigation and consultation with those whose opinions are worth while, goes without saying. My personal feeling is that whatever our private opinions may be in regard to the abolition of restricted districts that it is up to us to put them aside if our opinions are contrary to the wishes of the Government, and to co-operate loyally and wholeheartedly.

Dr. Hassler, who has charge of the work, has been most kind and considerate and has displayed great patience and forbearance throughout. Dr. Brodrick has taken a keen interest in the hospital treatment of these cases, and has cooperated enthusiastically as well in other phases of the matter. Dr. Stevens, who has carried on the work since December, has very courteously allowed me access to his records. Dr. Irvine, in charge of the State Bureau for Venereal Diseases, has given me access to the literature in his office and helped me in other ways. To all of these gentlemen I wish to render thanks.

(Copy.)

H. G. Irvine, January 11, 1918.
512 Underwood Bldg.,
San Francisco.

The Government appreciates your work in California which has been of inestimable value not only to Surgeon General, but to law enforcement of War Department. Hope work will continue there with unabated vigor during your absence in Minnesota. California program widely influential in other States.

(Major) W. F. SNOW,
Surgeon General's Office.

(Copy.)

Warren Olney, Jr., January 11, 1918.
Chairman California Welfare Commission,
Merchants' Exchange Bldg.,
San Francisco.

Joint accomplishments of California Military Welfare Commission and State Bureau for which

you secured appropriation have hereby approval of Secretary Baker. California plan being adopted by other States. Continued co-operation of your Commission and State Bureau of Venereal Diseases necessary for protection of present and future enlisted men in California.

By order of the Secretary of War.

RAYMOND B. FOSDICK,
Charge War Department Commission on Training Camp Activities.

NON-BEVERAGE ALCOHOL.

By FELIX LENGFELD, Ph. D., San Francisco.

The Food Conservation Act practically prohibits the distillation of alcohol for beverage purposes after September 9th, 1917. The War Revenue Act imposes a higher tax on beverage than on non-beverage alcohol. To carry out these provisions the Treasury Department has issued regulations which affect the physician who uses alcohol for scientific or medicinal purposes. Nobody can buy or sell, obtain or give away, unmodified non-beverage alcohol without first obtaining a permit from the Collector of Internal Revenue. This prohibition is absolute. It applies to the physician and to the physician's prescription. The pharmacist has no discretion in this matter. He is not allowed to sell alcohol unless it first be modified in accordance with one of ten formulae sent out by the Department. The simplest of these is formaldehyde .4%, or carbolic acid 1%, or mercury bichloride 1/20%. Formaldehyde has been generally adopted and most druggists are now sending out alcohol modified by the addition of .4% formaldehyde.

Physicians' prescriptions containing straight alcohol may be filled if there is a sufficient quantity of medicinal ingredient to make the finished mixture unfit for use as a beverage. The prescription must be bona fide. If the physician desires to obtain straight alcohol he can either get a permit from the Collector of Internal Revenue, or he may, at the present time, purchase from a liquor dealer alcohol which was distilled prior to September 9th, and on which the higher tax was paid. The supply of such alcohol is extremely limited and will, undoubtedly, be exhausted in a very short time. It is rather more expensive than non-beverage alcohol, and its sale is practically forbidden the pharmacist who holds a permit for non-beverage alcohol. At best, the relief from this source is temporary.

To get a permit the physician must fill out a form of application which he must obtain from the Collector of Internal Revenue, and must file a bond in the sum of approximately $6.00 for each gallon of alcohol he is liable to have in his possession. This bond may be as small as the physician desires, but for ordinary purposes a bond of $50 would be required. This bond may be issued by a Surety Company, which will charge $5.00 a year, or it may be a personal bond secured by deposition with the Collector of Internal Revenue of United States bonds for at least $50. A practical way seems to be to deposit a $50.00 Liberty Bond. The physician will, of course, get the interest on this and when he surrenders his permit he will have the bond returned to him. There are, perhaps, other ways, but they at present are not practicable.

The permit costs nothing, is good indefinitely and must be posted somewhere in the physician's office.

Having obtained the permit, the physician can buy non-beverage alcohol by filling out an order blank in triplicate and signing all three copies. One of these will be returned to him to be filed, one sent to the Collector of Internal Revenue, and one kept by the dealer making the sale. The physician will not be allowed to do as he pleases with this alcohol, but must use it entirely for the purpose specified in his application. He cannot use it for household purposes, but probably will be permitted to leave a small quantity with a nurse to be used on a patient if he considers it absolutely necessary. He will probably not be permitted to leave any with a patient unless the nurse acts as his agent, and he will be responsible for the agent.

The layman can purchase beverage alcohol distilled prior to September 9th, from his liquor dealer, but when this stock is exhausted there is no way by which the layman can obtain unmodified alcohol excepting that left with the nurse.

There seems to be a question as to whether the use of a small quantity of formaldehyde in alcohol intended for rubbing, is injurious. If the medical profession should decide that it is injurious and that there are cases when an alcohol rub is essential, some means should be found by which the physician can prescribe straight non-beverage alcohol, for straight beverage alcohol will soon be entirely off the market. If the medical profession takes this view, there is no doubt but that the Treasury Department will issue regulations to that end. It therefore behooves the various medical societies to thrash out the matter and get a decision.

Original Articles

HODGKIN'S DISEASE AND ITS TREATMENT, WITH A REPORT OF CASES.*

By W. W. BOARDMAN, M. D., San Francisco.
From the Medical Department Stanford University Medical School.

Hodgkin's disease presents a therapeutic problem which is as yet unsolved and will, in all probability, so remain until its etiology is definitely established. The discussion of this subject has been continuous since the recognition of the disease, but the results are far from satisfactory.

Wilks[1] in his second paper concluded that, "Whether the disease be a constitutional one, or whether the system be infected from a local source is a question to be answered only in connection with numerous other maladies, as cancer, lardaceous disease, pyaemia, etc. The generally accepted doctrine has been that an affection like the present must be constitutional, but modern research would quite approve of a theory which should make it commence in one part of the lymphatic system and from this as a source of contamination be propagated through the body." For twenty years following this statement, although there were some advocating the infectious nature of the disease and others its neoplastic nature, the majority held that it was a constitutional disurbance.

* Read before the Forty-sixth annual meeting of the Medical Society, State of California, Coronado, April, 1917.

1. Wilks, S.: Guy's Hosp. Rep., 1865, XI, 56.

However, the reports of Delafield,[2] Sternberg,[3] and others seemed to establish its infectious nature by apparently demonstrating the tubercle bacillus as the causative agent. This belief was eventually upset by Clark,[4] and Reed,[5] in 1902, both of whom, although denying the tuberculous origin of the disease, maintained on clinical and pathological grounds that it was a chronic inflammatory process of unknown cause. Reed's work was also of tremendous value in rescuing Hodgkin's disease from the confusion and uncertainty at that time pervading the entire question of lymph gland enlargement and in establishing it as a definite clinical and pathological entity. The confirmatory reports from Longcope,[6] MacCallum,[7] Simons[8] and others, seemed to settle this question and left only the infecting agent to be discovered.

From time to time, various organisms have been described in Hodgkin's disease, but all have failed of final proof. At present, claims are being made for a pleomorphic, gram-positive, non-acid-fast, diphtheroid bacillus, which has been found in the glands in a number of cases. Fraenkel and Much,[9] in 1910, first reported an organism apparently of this type, which they were able to recognize in the stained smears from the residue of glands digested with antiformin. No cultures were obtained. They considered the organism either a special form of the tubercle bacillus, or one related to the group of tubercle bacillus.

In 1913, Negri and Mieremet[10] reported having cultured from the glands of two cases, an organism of the diphtheria group agreeing morphologically with the forms described by Fraenkel and Much. Independently and almost simultaneously, Bunting and Yates[11] reported the successful culture from the glands of six cases of a pleomorphic non-acid-fast, gram-positive diphtheroid organism. Later[12] in the same year, they reported the occurrence of glandular enlargements in monkeys following the subcutaneous injection of pure cultures of this organism and the recovery of the organism in pure cultures from these enlarged glands. The histological picture presented by these glands was stated to resemble that seen in human Hodgkin's. On this evidence they felt justified in naming the organism "Bacillus Hodgkini," and in presenting it as the cause of Hodgkin's disease.

Billings and Rosenow[13] almost immediately confirmed Bunting and Yates by reporting positive cultures in a series of 12 cases and recommended in no uncertain terms the therapeutic use of a vaccine prepared from these cultures.

2. Delafield: Med. Rec., N. Y. 1887, I, 424.
3. Stemberg: Zeitschr. f. Heilk. 1898, XIX, 91. Centralbl. f. d. Grenzgeb. d. Med. & Chir. 1899, II, 641; 911; 770; 813; 847.
4. Clarke: Brit. M. J. 1901, II, 701.
5. Reed: Johns Hopkins Hosp. Rep. 1902, X, 133.
6. Longcope: Bull. Ayer Clin. Lab. Penn. Hosp. 1903, I, 4.
7. MacCallum: Tr. Ass. Am. Physicians. 1907, 350.
8. Simmons, C. C.: J. Med. Research, 1903, IV, 378.
9. Fraenkel & Much: Zeitschr. f. Hyg. u. Infectionskrankh. 1910, LXVII, 159.
10. Negri & Mieremet: Central bl. f. Bakteriol. 1913, LXVIII, 292.
11. Bunting & Yates: Arch. Int. Med. 1913, XII, 236.
12. Bunting & Yates: J. Am. M. Ass. 1913, LXI, 1803.
13. Billings & Rosenow: J. Am. M. Asso. 1913, LXI, 2122.

With these and other reports,[14] it was definitely established that diphtheroid organisms could be grown from the glands of Hodgkin's disease in at least a large percentage of cases. Further studies[15] however, demonstrated the presence of a similar organism in the lymphatic glands in other conditions both normal and abnormal. To meet these later findings, Yates[16] has expanded his vision to include in one great group, lymphatic leukemia, possibly myelogenous leukemia, pseudoleukemia, chloroma, mycosis fungoides, Banti's disease, some forms of lymphosarcoma, certain arthritides and a type of recurrent elephantiasis like cellulitis, all of which he believes result from the activity of the Bacillus Hodgkini (or to similar, but as yet undifferentiated micro-organisms). This is indeed a bold position to assume, as there are many links in the chain of evidence which are as yet missing. However, it is a stimulating working hypothesis.

The evidence in favor of the B. Hodgkini as the causative agent in Hodgkin's may be summarized as follows:

1. Demonstration of the organism in the diseased tissues by staining methods.
2. Cultivation of the organism from the diseased tissues in at least a large percentage of cases.
3. The occurrence of glandular enlargements following the subcutaneous injection of the organism into monkeys.
4. The recovery of the organism from the enlarged glands so produced.
5. The occurrence of similar glandular enlargements in a second monkey following the subcutaneous injection of a pure culture of the organism recovered from the glands of the first monkey.
6. The production, in these injected monkeys, of a blood picture similar to that believed by Bunting and Yates to be characteristic of human Hodgkin's disease.
7. The production in a normal individual of this characteristic blood picture four or five days after the injection of a polyvalent B. Hodgkini vaccine.
8. The cultivation of the organism from the blood of patients during the febrile period.

On the other hand, the evidence against the B. Hodgkini may be summarized as follows:

1. Diphtheroid organisms are widely distributed and may be cultivated from a variety of normal and pathological tissues—Hodgkin's disease, lymphosarcoma, cancer, leukemia, Banti's disease, tuberculosis, simple lymphocytomata, etc.
2. The very frequent occurrence of other organisms in the enlarged glands.
3. The failure of the specific blood reactions with the organism.[17] [18]

14. Ives, George: J. Missouri M. Ass. 1915, XII, 91. Mellan, Ralph, R.: Am. J. M. Sc. 1915, CL, 245.
15. Steele A. C.: Boston M. & S. J. 1914, CLXX, 123. Bloomfield, A. L.: Arch. Int. Med. 1915, XVI, 197. Fox, Herbert: Arch. Int. Med. 1915, XVI, 465. Langford J. A.: New Orl. M. & S. J. 1915, LXVII, 983. Rhea, L. J.: Canad. M. Ass. J. 1915, V, 768. Rosenow, E. C.: J. Am. M. Ass. 1914, LXIII, 903. Simmons & Judd: J. Am. M. Ass. 1915, LXIV, 1631.
16. Yates: Colorado Med. 1916, XIII, 39.
17. Moore: J. Infect. Dis. 1916, XVIII, 569.
18. Olitsky, P. K.: J. Am. M. Ass. 1915, LXIV, 1134.

Plate 4. Case VI. January, 1915.
Showing marked mediastinal involvement and left sided pleural effusion.

4. The failure of the vaccines as a therapeutic procedure.

5. The lack of confirmation of the results of animal inoculation.[19]

19. Rhea & Falconer: Arch. Int. Med. 1915, XV, 438

For our present purpose, we need not enter further into this discussion. Considerable work must yet be done to definitely settle the question, but, it now seems probable that the diphtheroid organism is a commonly occurring saphrophite and not the cause of Hodgkin's disease.

Although the majority of authors have followed Reed in considering Hodgkin's a chronic inflammatory process of unknown origin, some have dissented from this view and consider it a true tumor.

Reed and her followers base their belief in the inflammatory nature of the disease on the following evidence:

1. The disease may run an acute or chronic course with periods of remission, irregular fever, sweats, emaciation, secondary anemia, etc.

2. The frequency with which the cervical glands are primarily involved, suggests an infection from the mouth.

3. The manner of extension is from one gland group to adjacent groups.

4. The histological picture seems to resemble a chronic inflammatory process more than a neoplasm.

5. There is an absence of capsular infiltration and infiltration of surrounding tissues.

6. Metastases are not caused by cellular transplantation, but by proliferation of pre-existing lymphoid tissue.

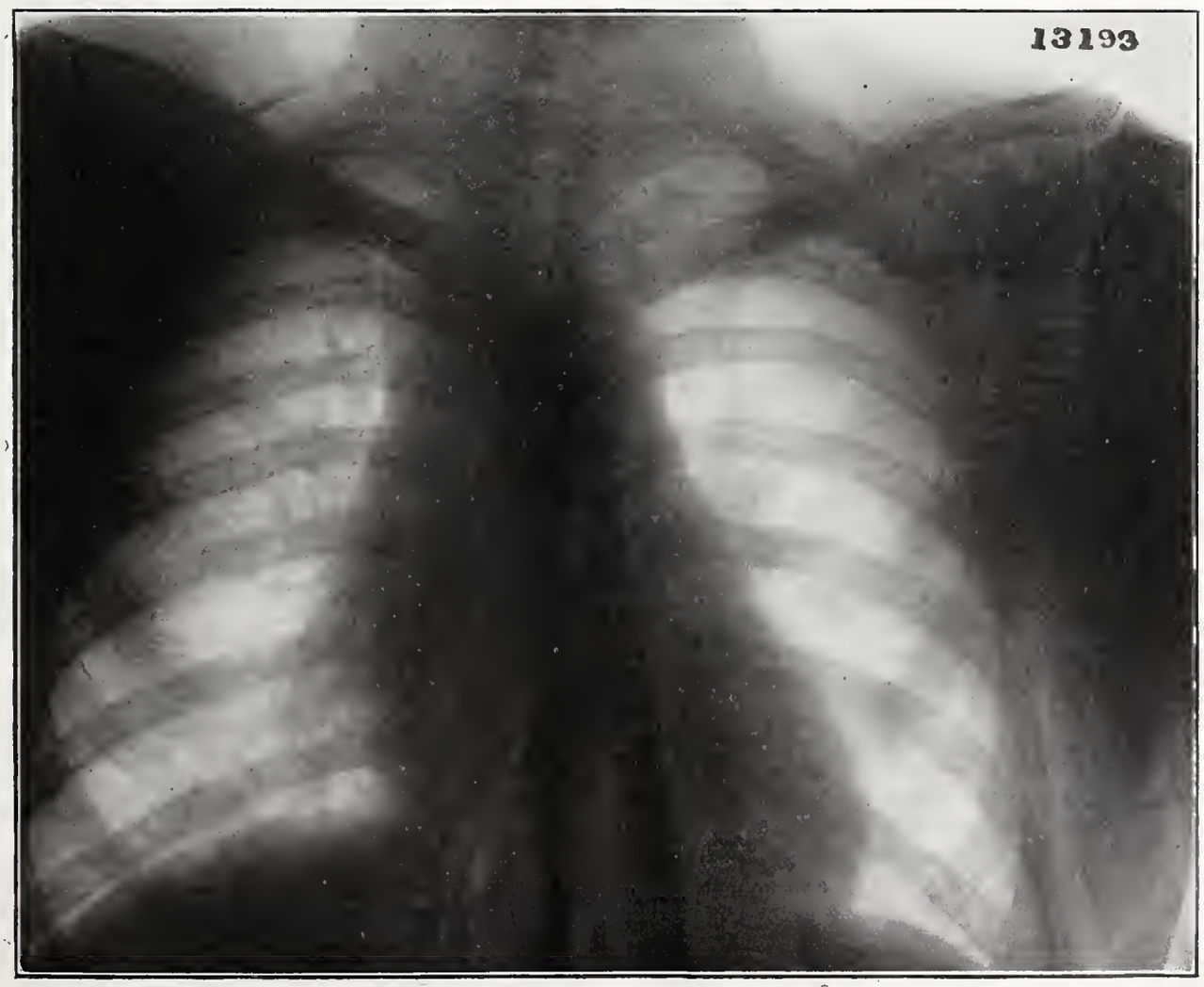


Plate 5. Case VI. February, 1916. After Röntgenotherapy.

Those who advocate the neoplastic nature of the disease do so on the ground that it is "essentially a lawless overgrowth of tissue cells," that it does infiltrate the gland capsule, that it frequently infiltrates other tissues (veins, lung, pleura, bone), that it uniformly tends to recur after operative removal and that it is uniformly fatal.

The evident contradiction regarding the infiltration of capsule and surrounding tissues is only apparent, as all recent authorities admit the occurrence of such infiltration, although some persist in upholding the infectious nature of the process.[20] [21] This question is impossible of final settlement at this time. If we accept Ewing's[22] definition of neoplasms as "all conditions which consist essentially of lawless overgrowth of tissue cells," we must agree with Oliver[23] when he says: "In this light we feel justified in classing Hodgkin's disease with lymphosarcomata and endotheliomata, and to include all as true neoplasms of a sarcomatous type." And, again, recalling Roux's work with chicken sarcoma when he says, "Nor do we admit that a possible future discovery of the causative agent will affect this conception."

The opposing schools have been gradually approaching each other, the one claiming that the process is an infectious granuloma, but possessed of some of the properties considered essential to new growths, the other claiming that it is a new growth, but possibly produced by the action of an infectious or toxic agent.

Until further evidence is produced, I prefer, as a working hypothesis, to consider Hodgkin's disease a neoplasm closely related to the lymphosarcomata and endotheliomata. In each condition, probably in response to chronic irritation either infectious or toxic, there results a lawless overgrowth of all the tissue elements of the gland. In lymphosarcoma, the overgrowth of the lymphoid tissue predominates the picture; in endothelioma the overgrowth of the true endothelium predominates. Hodgkin's lies intermediate between these two extremes.

The ordinary clinical picture of the disease is familiar to all—the painless enlargement of the glands, usually the cervical on one side with progressive extension to neighboring groups, until all the superficial and deep glands are more or less involved, as well as the spleen, and lymphoid tissue elsewhere in the body. These glandular enlargements show none of the signs of active inflammation, are not usually adherent to the skin or deeper tissues, are discrete and moderately firm. As they increase in size, they cause pressure symptoms, varying according to the region involved. In the later stages, irregular temperature and distressing sweats may occur. The disease is progressive, running an acute or chronic course, varying from two months to five years. Death results either from a complicating infection or from gradual wasting.

A definite diagnosis of Hodgkin's cannot be made on the clinical findings even in typical cases, but must be based upon the microscopic examination of an excised gland. There are some who advise against this procedure on the ground that such "test" excisions excite the process to increased activity, but, so far as my observations go, the removal of a superficial, discrete, freely movable gland is not attended by any such response and the information thus gained is of the utmost importance and can as yet be obtained in no other way.

Recently, Bunting and Yates[24] [25] [26] [27] have described and insisted upon the diagnostic importance of the blood changes they have noted. They state that "throughout the disease there are two constant features—an increase in blood platelets and an absolute increase in the transitional leucocytes. In regard to the other elements, in early cases there is a transitory increase in lymphocytes and basophiles and a deficiency in eosinophiles with a normal or low neutrophilic count, followed by a gradual decrease in lymphocytes and a moderate eosinophilia. In the latter cases, there is a marked neutrophilic leucocytosis and a diminution in the percentage of all other elements except the transitional leucocyte." These rather slight and changing alterations in the blood picture, they believe, are specific expressions of the activity of the diphtheroid organism, and so positive were they in this belief, that in 1914, they stated, "At the present time a satisfactory blood examination gives the most reliable immediate diagnostic evidence."

Up to the present writing, I am not aware of any change in their attitude, although, as has been stated, Yates now believes that the B. Hodgkini, or an organism as yet undifferentiated, is the causative agent in a number of diseases. As the blood changes are claimed to be specific to the organism, they should be found in all these diseases and, therefore, be of little value in differential diagnosis. It would seem to require more than the ordinary skill and enthusiasm to interpret properly such slight alterations, particularly when we remember that these alterations, except for the platelet increase and the slight absolute increase in transitionals, are constantly changing as the disease progresses. Certainly, until further proof has been advanced, we must continue to base our diagnosis of Hodgkin's disease upon the microscopic examination of the excised gland.

Confronted, then, with a definite diagnosis of Hodgkin's disease, our therapeutic problem is that of handling an essentially malignant, uniformly fatal process in which there is still some insufficient evidence of an infectious origin. All methods of treatment so far advocated have, in the end, proven unsuccessful.

With such a background, it is evident that a

20. Bunting & Yates: J. Am. M. Ass. 1915, LXIV 1953.
21. MacCallum: Text book of Pathology. 1916.
22. Ewing: J. Med. Research. 1913, XXVIII, 1.
23. Oliver: J. Med. Research. 1913-14, XXIX, n. s. XXIV, 191.
24. Bunting: Johns Hopkins Hosp. Bull. 1911, XXII, 369.
25. Bunting: Johns Hopkins Hosp. Bull. 1914, XXV, 173
26. Bunting & Yates: J. Am. M. Ass. 1915, LXIV, 1953
27. Bunting & Yates: J. Am. M. Ass. 1917, LXVIII, 747.

search for new and for a better application of the old methods must continue.

Prophylactically, whether or not we accept the infectious theory of the disease, there can be no question about the advisability of removing all points of focal infection, and thus relieve the regional glands of this source of irritation.

Therapeutically, as has been said, we are dealing with an essentially malignant process, and as in all malignant processes the only faint ray of hope lies in early diagnosis. However, very few cases are properly diagnosed until the process has become more or less generalized. There are two reasons for this late diagnosis, first, ignorance on the part of the patient; secondly, laxity on the part of the physician. Education is necessary in both instances—for the laity, that they may seek medical advice early for grandular enlargements, and—for the physician, that he may look more critically upon such enlargements and treat those belonging to this type with all the energy and all the means at his command, rather than to assure the patient that, the tumor is not "cancer" and dismiss him with a bottle of Fowler's solution, to watch with increasing concern, the gradual progress of the disease.

What, then, can be done for these patients? As yet, cure seems doubtful, although in a recent study, Bunting and Yates [26] [27] report apparent cure (five years without evidence of the disease) in two cases, and encouraging results in others. Their procedure based on their conception of the disease is as follows:

1. "Removal of all foci of infection."
2. "The surgical removal of the major portion of the diseased tissue. when possible."
3. "The destruction of the remaining bacteria by any and every means, especially the Röntgen ray, hygiene and more recently vaccine therapy has been employed."
4. "The conversion into fibrous tissue by hygiene and the Röntgen ray of such irremovable abnormal tissue as cannot undergo resolution."
5. "And, finally, to continue treatment as circumstances seem to indicate until a clinical and röntgenologic examination and a normal blood picture indicate a cure has been of at least a year's duration."

In considering these recommendations more in detail, we agree that the removal of all foci of infection is advisable on general grounds, if not on the grounds of ridding the patient of a specific focus of infection. In this regard, the removal of the tonsils in all primary cervical cases is advised, whether or not they show surface indications of disease.

The surgical removal of the diseased tissue has, in the past, been of no avail, in spite of the most careful and extensive block dissections. However, in the present state of our knowledge, it would seem advisable to undertake radical operations in all cases where the process is limited to one group of glands. With earlier diagnosis and radical operations, cure should be possible, unless the glandular enlargements are neither infectious granulomata, nor neoplasms, but local manifestations of a general systemic (metabolic or otherwise) disturbance.

Following the operation, it has been advised to treat thoroughly the field with tincture of iodine in the hope of destroying any remaining bacteria. Although we are far from certain that there are specific bacteria to be destroyed, as this treatment can do no harm, it should be given thorough trial.

Until the possibilities of such surgical procedure have been demonstrated on the localized cases, we do not feel justified in recommending radical extensive and apparently useless operations in cases with generalized glandular involvement, particularly when the groups of glands subject to operative removal can in our experience be made to disappear by other means.

"Hygiene" is one of the methods recommended for the "destruction of the remaining bacteria" and the "conversion into fibrous tissue of such irremovable abnormal tissue as cannot undergo resolution." Symptomatically, it is important to keep the patient in the highest functional efficiency, and drugs, diet, rest, etc., should be used as indicated, but in the absence of all clinical and experimental evidence, we doubt that such measures play a more important part in the course of Hodgkin's disease than in any malignant process.

Coley's toxines have been of no avail in Hodgkin's disease.

Autogenous and stock vaccines of the diphtheroid organism have been given a thorough trial, and although the earlier reports were exceedingly optimistic, further observation has shown that they are "of no value and may be harmful." [28]

Efforts are at present being made to develop with the diphtheroid organism an immune serum, but no constant results have as yet been obtained, although Bunting is still hopeful.[27] Further progress along this line will be watched with interest, but until the relationship between the organism and the disease is more definitely established, one must be rather skeptical of seeming improvement in an isolated case.

Thus far, we see that drugs and vaccines are of no avail; that the immune serum offers but a doubtful future possibility, and that the removal of all foci of infection and the radical removal of the glands, even in early localized cases, has still to be followed by cure.

Röntgenotherapy is somewhat more promising and without doubt is our most valuable single method of treatment. It has been used for years with striking temporary results, as indicated by a decrease in the size of the glandular enlargements and improvement in general health, but the disease has always eventually progressed and death has resulted from involvement of the deeper glands with the accompanying pressure effects, fever, anemia, etc.

The marked decrease in the size of the glands under Röntgenotherapy has been explained as due to the absorption and death of the more cellular elements of the tumors with the production of a

28. Bunting: Personal communication.

varying amount of new formed fibrous tissue. In one case coming to post-mortem, after three years of Röntgenotherapy, Dr. Ophüls was unable to find any glandular remains in the cervical, axillary or inguinal regions, nor was there any appreciable fibrosis. In these regions, a local "cure" had apparently resulted from persistent Röntgenotherapy. However, the patient died with involvement of the deeper glands. If such local "cures" can be produced, the ultimate failure of the treatment must be explained as due either to insufficient treatment; to such an alteration in the character of the tissues, that they are no longer susceptible to the Röntgen rays; or to the fact that the glandular enlargements are but local manifestations of a general disease. Against the latter theory may be argued the fact that, so far as I am aware, no case of Hodgkin's disease has come to death without showing glandular enlargements.

Increased tissue resistance has not been established in Hodgkin's. It is possible that in some cases the process assumes an increased resistance to the rays, but my own experience and that of others [29] seems to show that glands, once thoroughly treated, show but slight tendency to recur, and respond readily to further treatments.

Bunting and Yates [26] have proposed an original but far from convincing partial explanation for the ultimate failure of Röntgenotherapy. In subjecting cultures of the Bacillus Hodgkini to the action of the X-rays, they found that young cultures (not over five days) were destroyed by one exposure, whereas, older cultures showing involution forms were resistant. Apparently, they wish to imply that in the glands subjected to radiation, involution forms develop and further treatment, failing to destroy them, fails of ultimate success. There are many objections to this point of view other than the fact that the organism has not been proven the causative agent. They themselves report negative cultures from a gland which had received the usual Röntgenotherapy "at a time when the technic had been developed so that positive cultures were being obtained constantly from tissue that was found histologically to show the disease."

These two observations fail to support each other and from their standpoint, the logical conclusion would seem to be that treatment had produced a cure in this individual gland and that general cure should follow, if all involved glands were similarly treated. At any rate, these observations do not explain the ultimate failure of Röntgenotherapy.

Finally, there is much evidence to support the belief that insufficient treatment has played a prominent part in the majority of fatal cases. In these there has usually been extensive involvement of the deeper glands—abdominal or mediastinal—regions, in which only recently, through the introduction of the Coolidge tube and the development of proper technic for deep therapy, has it been possible to treat satisfactorily. An added factor is that, after four or five years of continuous treatment, the efforts of both physician and patient are apt to relax.

Permanent cure seems doubtful, but with the improved technic in Röntgenotherapy, it is wise to withhold final judgment until further observations are made on early cases that are thoroughly, systematically and persistently treated. The evidence on which a claim for cure might be based is somewhat doubtful, but a period of five years without symptoms, would be safe. The restoration of the normal blood picture as recently proposed by Bunting and Yates is now admitted by them to be unreliable.[26] [27]

My personal experience includes the following nine histologically proven cases, seen in the Outpatient Department of the Stanford University Medical School, and in consultation.

Case I. G. V., an American school-boy, age 9, noticed enlargement of the glands on the right side of the neck 16 months before admission. These had been removed, at which time the boy's parents were informed that there was nothing more that could be done. Glands promptly recurred. At examination, an immense mass of discrete glands were found on the right side of the neck, extending from the clavicle to the mastoid. No evidence of other glandular involvement. Glands radically removed—these presented the histological picture of Hodgkin's disease. Röntgenotherapy begun over operative field, but interrupted by the patient sustaining a fracture of the skull—glands rapidly recurred, again radically removed. Röntgen treatment given into open wound. Patient left hospital for home in country, no subsequent treatment. Patient has not been heard from since.

Features of case: Delay in instituting proper treatment. Rapid local recurrence after radical surgical removal with insufficient Röntgen treatment.

Case II. T. D., 27258, school-boy, aged 12, first noticed three weeks before admission, three small tumors on the inner side of the right arm, which gradually enlarged. Examination showed enlarged cervical and axillary glands, as well as the three glands on the arm; the largest of these were 1.5 cm. in diameter. Gland removed from arm, showed histological picture of Hodgkin's disease. One Röntgen exposure given over the involved glands, but patient failed to return for further treatment.

Features of case: Extensive dissemination. Insufficient treatment.

Case III. H. A., 33027, age 22, first noticed enlargement of the glands of the neck ten years before admission; in the next five years had three operations, but the glands recurred each time. Examination showed a mass of discrete glands, variable in size, above the right clavicle, few small glands in left anterior cervical region, substernal dullness with widening of the superior mediastinal shadow on the Röntgenogram. Glands were removed with the clinical diagnosis of recurrent tuberculous glands. Histological examination showed typical Hodgkin's disease. Röntgenotherapy given over operative field and mediastinum. Seven months after operation reported no superficial evidence of enlarged glands and normal health. Could not return for further treatment.

Features of case: Apparent long duration. Mediastinal involvement. Operative removal not radical. No accentuation of the process after operation. No local recurrence after seven months following Röntgenotherapy. Insufficient treatment.

Case IV. J. B., 24078, age 28. Three months before admission, began to cough and expectorate, later had left pleural pain, fever, sweats, shortness

29. Holding & Brown: J. Am. M. Ass. 1917, LXVIII, 701.

of breath and loss of 30 lbs. weight. Examination showed single enlarged gland in right superclavicular region with substernal dullness and mediastinal widening on the Röntgenogram. Temperature ranged from 100 to 103. Gland removed from neck showed typical Hodgkin's disease. Röntgenotherapy started but patient left for home in the East. No subsequent report.

Features of case: Apparent acuteness of process. Practical limitation of process to a region inaccessible to surgery. Insufficient treatment.

Case V. E. McG., school-girl, age 18, had had sore throat and poor health for years. Five months before admission, noticed a gradually increasing enlargement of the right side of the neck, later involving the left side, loss of strength and night sweats. Examination showed masses of large, hard, discrete, closely packed glands on both sides of the neck, slight substernal dullness, with mediastinal widening on the Röntgenogram. Gland removed, showed typical Hodgkin's disease. Röntgenotherapy administered with complete disappearance of the superficial glands and marked improvement in general health. Treatments then became very irregular and finally ceased. Patient died one and one-half years after last treatment with marked mediastinal involvement. Vaccines were given in this case, but without effect.

Features of case: Apparent severity of the condition on admission. Marked improvement under Röntgenotherapy. Insufficient treatment and death.

Case VI. E. B., 29370, age 23, began to be troubled with dry cough one year before admission; this increased in severity and was accompanied by shortness of breath and enlargement of the glands of the neck and axillae, with loss of 33 lbs. He had spent two months in bed in a local hospital on medical treatment, but without effect. Examination found him very dyspneic; left supraclavicular group of glands varied from 1 to 4 cm. in diameter, similar group of glands on right side of neck, similar, but larger glands in both axillary regions, some 8 cm. in diameter, inguinal glands enlarged, but smaller, marked substernal dullness with marked enlargement of the precordial dullness and evidences of left sided pleural effusion. Left radial pulse smaller than right. Temperature ranged from 98.6 to 103, pulse 80 to 140, respiration 20-35.

Röntgenogram of the chest (Plate 4) showed marked mediastinal widening and clouding of left lung field. Gland showed typical histological picture of Hodgkin's disease. Röntgenotherapy was administered, although the condition seemed hopeless, the patient being unable to lie down during the treatments. Improvement was rapid and marked so that in two months the patient left the hospital, without subjective symptoms, no appreciable enlargement of the superficial glands and marked decrease in the extent of the mediastinal involvement (Plate 5). For a short time patient returned regularly for treatments, but eventually we were unable to persuade him to leave his work as a farm hand and come for treatment when he felt perfectly well. Nineteen months after the last treatment he reappeared with a moderate enlargement of the superficial glands, increase in the mediastinal involvement and a return of some of the subjective symptoms. Treatment was given and it is hoped it may be persisted in.

Features of case: Lack of proper treatment early in course. Apparent severity of the condition. Marked improvement under Röntgenotherapy. Discontinuance of treatment with return of symptoms.

Case VII. W. V. M., 22548, American clerk, aged 29, had noticed some variability in the size of the glands in the left side of the neck during the preceding year, with later enlargement of glands under the left pectoral muscle and in the left axilla. More recently he had been troubled with cough and expectoration, shortness of breath, loss of weight, night sweats and general malaise. Examination showed enlargement of the glands of the left side of the neck under the left pectoral muscle and in the left axilla, substernal dullness, with marked widening of the mediastinal shadow on the Röntgenogram (Plate 7). Gland removed from the cervical region showed typical Hodgkin's disease.

Röntgenotherapy given with practical disappearance of the superficial glands and decrease in the extent of the mediastinal involvement (Plate 8), with absence of cough and marked improvement in the general health. Treatments now became irregular, until patient was suddenly taken with difficulty in swallowing, demonstrated to be due to a narrowing in the upper oesophagus (Plates 9 and 10). Treatments applied over the upper chest have caused a slow but gradual decrease in the severity of these symptoms; the patient is at present working regularly and still under treatment.

Features of case: Apparent severity of the symptoms. Marked improvement under Röntgenotherapy. Recurrence under insufficient treatment. Oesophagial involvement.

Case VIII. G. T., ranch hand, age 22, began to have swelling of the left leg two months before admission. Examination showed a single gland at angle of the jaw on the right side. Left leg swollen to one and one-half times normal size (Plate 11), inguinal glands markedly enlarged on left, with a mass of glands palpable in the left iliac fossa; similar mass palpable in right side. Gland removed showed histological picture of Hodgkin's disease.

Under Röntgenotherapy over these glands the oedema of the left leg cleared up and the patient left the hospital with instructions to return for further treatment. Many months later he appeared at the University of California Hospital with marked enlargement of the pelvic glands. Röntgenotherapy was again successful in causing improvement, but treatment was discontinued. Death finally occurred from gradual wasting.

Features of case: Extensive involvement of pelvic glands. Unilateral elephantiasis. Marked improvement under Röntgenotherapy. Insufficient treatment. Death.

Case IX. O. H. B., 13571, an American, age 52, noticed one year before admission a swelling under the right arm. During the six succeeding months similar swellings appeared under left arm, on both sides of neck and in both groins. General health unaffected. Examination negative, except for the presence of these tumorous masses, the size of small oranges in neck, axilla and groins. Gland excised showed typical Hodgkin's disease.

Röntgenotherapy over the tumor masses caused practical disappearance of the enlarged glands. Patient then developed oedema of the lower extremity, involving genitalia, which cleared up with treatments directed over the pelvis. Next there appeared a left-sided pleural effusion requiring five tappings in the next eight months, after which the fluid did not reaccumulate; during this time small doses of X-ray were being given over the lower mediastinum. Finally the patient began to complain of abdominal pain and the treatments were directed over this region, but without apparent influence on the pain. In turning in bed, the patient suddenly developed a complete paraplegia due apparently to a transverse lesion of the cord at about the level of the XII dorsal vertebra. Patient suffered terribly for seven weeks and finally died of exhaustion. Autopsy by Dr. Ophüls showed the lymph glands small throughout the body, with some fibrous thickening about them. The only tumor mass overlay the XII dorsal vertebra. This was a firm greyish-white mass,

Plate 16. Case X. April, 1916.
Showing marked enlargement of the superficial glands.

Plate 19. Case X. January, 1917.
After Röntgenotherapy.

about the size of the palm of the hand, which had infiltrated and destroyed the body of the vertebra, thus allowing the sudden compression of the cord. This tissue presented the histological picture of Hodgkin's, but was the only evidence of the disease found after careful search.

Features of case: Progressive involvement of groups of glands. Destruction of the disease process in these involved glands by Röntgenotherapy. Infiltration of the vertebrae by the only remaining tumor. Paraplegia from twisting of the spine. Death and autopsy findings.

The following three cases are examples of the type of lymphosarcoma indistinguishable in clinical couse and therapeutic response from Hodgkin's disease, and closely resembling it histologically.

Case X. C. B., 40748, a Finnish fireman, aged 65, noticed enlargement of the glands of the left side of the neck, twenty-six months before admission; later the glands on the right side became involved. Examination showed tremendous enlargement of the glands mentioned (Plates 15 and 16), substernal dullness with marked mediastinal widening in the Röntgenogram. Gland removed for examination showed histological picture of lymphosarcoma; Röntgenotherapy administered regularly for past year has caused practical disappearance of the superficial glands (Plates 18 and 19), with decrease in size of the mediastinal involvement. There has been no disturbance in general health at any time.

Features of case: Marked and diffuse involvement of glands, without general symptoms. Marked decrease in size of gland tumors, under Röntgenotherapy. Similarity of the clinical and therapeutic course with that of Hodgkin's disease.

Case XI. M. A. B., salesman, age 28, noticed small swellings on both sides of his neck, two years before admission; these gradually increased in size; later a swelling appeared under the right arm; recently noticed a swelling on the middle of the right shin and an area of redness and induration on the inner side of the left leg; had lost 40 lbs. in weight. Examination showed a glandular mass above the left clavicle the size of a small orange, a similar, but smaller mass on the right side of the neck. Another single gland the size of an almond in the left axilla. A few small inguinal glands were palpable. Liver and spleen not palpable. Substernal dullness with mediastinal widening on the Röntgenogram. Areas of thickening over both shins resembling gummata. Wassermann repeatedly negative. Gland removed showed histological picture of lymphosarcoma. Röntgenotherapy administered over gland tumors and mediastinum with marked improvement, both in the local condition and in general health. The areas on the shin broke down and were considered typical luetic manifestations by Dr. Harry Alderson, in spite of the negative Wassermann reaction and specific treatment was pushed to the limit, but without effect upon these lesions. A section from the edge of the lesion was removed for histological examination and reported by Dr. Ophüls as lymphosarcoma. Röntgenotherapy administered over these lesions produced an immediate and rapid improvement. Patient is still under treatment, but considers himself perfectly well.

Features of case: Extensive involvement with disturbances in general health. Marked improvement in both local and general condition under Röntgenotherapy. Presence of lesions on the legs closely simulating gummata, due to metastatic involvement and showing improvement under Röntgenotherapy.

Case XII. H. H. D., American lawyer aged 50, had at time of admission, general glandular enlargement closely resembling that of Case X, but without mediastinal involvement. Gland showed lymphosarcoma. Under Röntgenotherapy the su-

perficial glands disappeared, then appeared oedema of the lower extremity, which yielded to Röntgenotherapy; then left-sided pleural effusion (Plate 25), gradually yielding to treatments over the mediastinum, then abdominal pain—treatments now were irregular and unsatisfactory. Patient developed fever, sweats and loss of weight and finally died, three and one-half years after beginning treatment. Autopsy showed no appreciably enlarged glands in neck, axilla, or mediastinum, but the mesenteric and retroperitoneal glands were very markedly enlarged.

Features of case: Clinical course very similar to Case IX. Marked improvement under Röntgenotherapy, while regularly administered. Insufficient treatment later. Long course of medical treatment (arsenic, etc.), before Röntgenotherapy was given.

A review of these cases emphasizes the following points:

1. The wide dissemination which had occurred in the majority of the cases before a correct diagnosis was made, or proper treatment instituted. In some, this delay is chargeable to the patient but in others it demonstrates a lack of diligence or knowledge on the part of the attending physician.

2. The frequency of early mediastinal involvement is striking.

3. A diagnosis based upon the blood findings was not possible in any of these cases. The examinations were made by various members of the staff, including Dr. Addis, Dr. Mehrtens and Dr. Barnett. In the majority of cases, the number of transitional and large mononeuclear cells combined did not exceed either relatively, or absolutely, the normal limits of transitionals alone. We, therefore, cannot make a diagnosis of Hodgkin's disease without the histological examination of an excised gland.

4. In no case was there an excerebration of the disease traceable to the removal of a test gland.

5. Vaccines were of no avail in one case; Benzol was tried in a second case, but without effect.

6. Radical removal of involved glands was followed by local recurrence, when insufficient Röntgenotherapy was given over the operative field.

7. Removal of foci of infection produced no evident alteration in the course of the disease.

8. In all cases so far treated, the superficial glands have practically disappeared under Röntgenotherapy and have caused no further concern during the course of the disease. There has, therefore, been no apparent reason or justification for radical removal of such gland groups.

9. Mediastinal and abdominal glands are not subject to surgical removal.

10. With proper treatment it is possible to cause absorption of these deep glands. How long such enlargement can be kept under control by deep Röntgenotherapy has still to be determined, as none of these cases has been satisfactorily treated throughout the entire course of the disease.

11. The close parallelism between certain cases of lymphosarcoma and Hodgkin's disease, both in clinical manifestations, response to treatment and histological picture, is very striking and suggestive.

In conclusion I may say that:

1st. The etiology of Hodgkin's disease is still unsettled.

2nd. The diphtheroid organism seems likely to prove a mere saphrophite.

3rd. There is good reason to consider Hodgkin's disease a neoplasm closely related to lymphosarcomata and endotheliomata.

4th. Efforts must be made for earlier diagnosis.

5th. Diagnosis must as yet rest upon the examination of an excised gland and not upon the examination of a blood smear.

6th. Treatment of early localized cases should consist of the radical removal of the involved glands and the removal of foci of irritation, together with thorough and persistent Röntgen treatment of the operative field and of all neighboring lymphatic areas, especially the mediastinum. Cure seems possible in these cases.

7th. In the more advanced cases with wide dissemination, the only treatment is Röntgenotherapy. If this is given thoroughly and persistently, remarkable temporary results may be obtained and it is remotely possible that cure might be achieved.

8th. In the advanced cases I have seen no indication for surgery other than the removal of foci of irritation.

9th. Vaccine therapy has been a failure and there is little reason to expect more from the immune serum.

10th. The technical details of Röntgenotherapy have been omitted from this discussion.

In conclusion I wish to express my appreciation to the members of the staff of the Stanford University Medical School for their co-operation in this work and especially to Miss G. Dunn, the technician in the Department of Röntgenotherapy.

HEADACHE RESULTING FROM PATHOLOGICAL INTRA-ORAL AND INTRA-NASAL CONDITIONS.*

By ADOLPH B. BAER, M. D., San Francisco, Cal.

One of the greatest, if not the greatest, source of satisfaction and pleasure which I have derived from the practice of this specialty, has been the relief of the large number of headaches, head pains and neuralgias which have resulted from conditions arising within this field, and the greatest sufferers and the most intense pains have usually been cured by the treatment of a comparatively simple condition. We know, of course, that one of the most difficult symptoms to account for and to treat satisfactorily is headache. We know also that the great majority of head pains are systemic in origin. If, however, a thorough general examination fails to account for the headache, the patient must always be examined by a head specialist. I have been surprised at the number of cases, patient sufferers for years, never examined by a specialist, who have been immediately relieved by the treatment of an intra-nasal or intra-oral condition.

In this paper, without any idea that I am tell-

* Read before the California State Medical Society at Coronado, April 17, 1917.

ing you anything which all of you do not know already, I shall merely attempt to review briefly the intra-nasal and intra-oral conditions which can be the cause of head pains.

Headaches of nasal origin are peculiar. They are usually not constant in severity. They are intensified by stooping, jarring, prolonged mental work and loss of sleep. They are apt to be unilateral, worse in the morning (usually disappearing towards noon), and are increased on lying down. They are present independent of eye strain, and relieving an eye condition or an eye muscle strain will have no effect upon the headache. Eye headaches will practically always be relieved by resting the eyes or by applying the proper eyeglass correction.

Of course, there are certain headaches which will have both a nasal and an orbital origin, and correcting one condition will relieve but not entirely cure the headache. Or we may accentuate an eye strain by over use and precipitate a reflex nasal disturbance, and to that extent contribute toward its causation. This is illustrated when proper nasal treatment will cure a headache, even in the presence of uncorrected ocular defects of relatively high degree.

In character and degree a nasal headache may range from an occasional neuralgia, to a sense of tightness at the root of the nose between the eyes; to a continuous dull ache; to a fulminating, throbbing pain, radiating to all the branches of the trigeminal nerve. I have seen cases simulating migraine with a history of the circular band pain of neurasthenia, and the pain of a driving nail being forced into the vault of the head, disappear by relieving an intra-nasal pressure between the septum and a lower turbinate.

The various intra-nasal conditions which can be the cause of headache, have been best summarized by Grunwald as follows:

(1) Swelling of the mucosa, causing pressure contact upon nerves.
(2) Negative pressure within the sinuses.
(3) Positive pressure by sinus suppuration.
(4) Ulceration of the mucosa, involving nerve endings and seen in atrophic rhinitis.
(5) Autointoxication by reabsorption of purulent secretions.
(6) Any condition which causes acute congestion of the cranial circulation.
(7) The spheno palatine ganglion syndrome.
(8) And most important of all, direct contact, or abnormal points of contact, between the septum, turbinates, uncinate process, bulla ethmoidalis and septum tuberculi.

We will frequently overlook one or the other of these various conditions if we make but a single examination. At least three examinations at different times and under different conditions must be made, before we can arrive at a satisfactory conclusion. The severity of the headache bears no relation to the pathological lesion and we can very easily overlook a minor and apparently unimportant nasal change, which may account for a severe and intense headache.

Swelling of the mucosa of the middle turbinate impinging against a relatively high deviation of the nasal septum, by disturbance of the local circulation or causing pressure upon the spheno-palatine ganglion will cause a symptom complex—i. e., nausea, vomiting, vertigo and intense headache, often described as migraine. The headache is usually bilateral because the thickened septum will usually obstruct and cause pressure in both nostrils, and in consequence, compress both ganglia or their nerve distributions at the same time.

Many headaches which begin at puberty and cease spontaneously in later life may be explained by the fact that the nasal mucosa is no longer erectile. And these headaches are very often inherited because the abnormal anatomical intranasal bone formation is also inherited. There will be the same form of septum deformity in every member of the same family.

In the great majority of cases the deviation may be of very slight extent. A slight abnormality will produce marked symptoms in one patient, while a most extreme deformity will be borne with no discomfort whatever by another. *High deviations, far back in the nose, are usually the most important.* The posterior part of the middle turbinate—i. e., the region over the sphenopalatine ganglion—seems to be the point of greatest irritation. The convergence of the bony walls above allows a relatively small deflection to cause a marked pressure and obstruction when the mucosa swells.

During the interval between the attacks, when the mucosa is normal, we may completely overlook the deviation. During the attack it is not difficult to demonstrate the deviation, the swelling and the resulting contact and compression. Many patients will complain of the nasal obstruction, and speak of the stuffiness of the head and nose, or refer to the fulness and pain in the nose between the eyes. But as a rule the pain will overshadow the subjective symptoms and in the interval between the attacks they will be too slight to attract the patient's attention. On the other hand, the obstruction is at times so marked and the contact point so sharp, that separation is impossible.

I believe that a thorough and complete submucous resection will cure most of these cases. But the operation must extend from the cribriform plate to palatine crest, and posteriorly to the anterior wall of the sphenoid. No amount of tinkering with the turbinates will do more than temporarily relieve the condition. A secondary hypertrophy of the removed turbinates, or a compensatory hypertrophy of one of the other turbinates, will soon restore the original pressure against the septum. After complete removal of all spines and spurrs and thickenings, of the septum tuberculi in front, and of the long spines which are so frequently seen posteriorly and high up, no possible amount of turbinate swelling will be able to cause pressure, for the resilient membranous partition will give before any turbinal overgrowth, should it occur.

It is not uncommon for patients to date the onset of a headache from a blow upon the nose, and not a few will refer the pain to the eyes. For these injuries will usually result in a high septal deformity, leaving the lower two-thirds of

the nose sufficiently clear to permit of perfectly free breathing and the condition will result most commonly in an eye headache; usually a dull ocular pain, which is increased when the patient uses the eyes. But correcting a possible eye condition which should, of course, always be done first, will have little or no effect, while a high septum operation will always clear up the headaches.

And there is another group, where the nose, unless examined during the stage of turgescence, will be regarded as normal. They belong to the neurotic group whose whole vasomotor system is unstable and toneless. Periodic headache in this group, caused by the increased turgescence of a turbinate, and consequent pressure upon a slightly deviated septum, will invariably be relieved by a turbinate operation, and they will be permanently cured by a septum operation.

We must not, however, in our zeal to correct septal deformities, overlook the lateral nasal wall. Our entire pathology may be caused by a prominent and hypertrophied uncinate process. This process may be so enlarged as to completely occlude the distal part of the nasal cavity. I have been surprised at the complete relief from headache which has reesulted from its removal.

The same may be said of prominent bulla ethmoidalis; the pressure of polyps from the frontal and ethmoid sinuses and the antrum; less frequently from hypertrophied posterior tips on the lower turbinate. And these lateral obstructions will occasionally be the cause of a sinus condition by causing the retention of normal secretions within the sinuses, with a resulting headache. It may be regarded as a prepurulent stage, but clinically there is no evidence of a purulent condition present. Nasal examination is negative, as are also X-ray examination and examination by suction. And the condition may last two, three or four months before the purulent stage is reached. But in the meantime the patient will complain of the most intense headache, which will be immediately and completely relieved by washing out the sinuses, usually, in fact, only the antrum.

I believe that it is impossible to associate within the nose, certain areas or regions with definite area, for referred pains about the head. No definite localization *even* for sinus headache is possible. The site of the pain helps very little in determining which sinus is affected. Only a thorough and complete examination of all the sinuses by the very exact methods now at our disposal will enable us to locate a headache within one or the other of the nasal sinuses.

Antrum pains are usually supra-orbital; less frequently infra-orbital; and they may radiate backward to the ear and occipital region.

Ethmoid and frontal headaches are usually referred to the ocular or frontal region. But a maxillary sinusitis may cause a reflex pain in the supra-orbital nerve similar in all respects to that caused by a frontal sinus infection. How often do we expect to find a frontal sinus infection which an examination turns out to be confined to the antrum.

Sphenoid sinus headache patients seem to be unable to describe or locate the pain. Most often it is a sort of boring pain toward the middle of the head far back between the eyes. But it may be parietal of occipital. And it may be located on the top of the head or radiating from the mastoid toward the top. In fact, occipito-parietal headache is always an indication for sphenoid sinus exploration.

Unfortunately, we occasionally get a frontal headache from involvement of the sphenoid, and we often get occipital headache in involvement of the frontal sinuses.

All of these sinus headaches may be caused by a simple catarrhal condition of the nasal mucosa with swelling and closure of the normal sinus openings. This results in a negative pressure or vacuum headache, which will be relieved by relieving the congestion and admitting a free supply of air. Or the condition may become chronic and persist even after the exciting cause has been removed.

Spheno-palatine ganglion irritation accounts for many intra-nasal headaches. It lies in the sphenomaxillary fossa, between the pterygoid process of the sphenoid and the superior maxilla; and is therefore in very close anatomical relationship to the sphenoid and posterior ethmoid sinuses.

It is therefore easy to understand how the ganglion may become infected directly from the nasal cavity (for it lies just below the surface of the nasal mucosa) or it may become involved secondarily by infection spreading from the sphenoid or ethmoid sinuses.

Sluder describes a symptom complex of sphenopalatine ganglion origin consisting of pain beginning at the root of the nose, extending to the upper jaw (and at times to the lower), backward under the zygoma and into the ear and mastoid, and thence to the neck, shoulder, arm and hand. When this condition is confined to the ganglion and is not secondary to a sphenoid or ethmoid sinus condition, there will usually be an inequality in the two sides of the soft palate; the arch on the affected side being higher, the uvula and median raphe being drawn to the opposite side. There is also a partial anesthesia and loss of taste on the affected side.

Naso-fibroma, and malignant growths in the nasal cavity and its sinuses, painful in themselves and by pressure, are fortunately rare.

In searching for a possible rhinological cause for headache, we will very often find the cause of trouble in the mouth. The ten years during which I practiced dentistry and oral surgery have proven of inestimable value to me in locating reflex or referred pains about the head, in pathological conditions occurring in the mouth and teeth.

These head pains or headaches may be located within the mouth itself, or they may spread reflexly over the head or be referred to other distant and remote parts of the body. The various tooth conditions causing such pains are: Dental caries; pulp stones; pyorrhea; chronic abscesses at the roots of apparently healthy teeth, with necrosis in the surrounding areas of the maxillary bones; acute abscesses; pressure by tooth roots, and by

unerupted teeth or impacted molars; supernumerary teeth; periostitis; osteomyelitis and maxillary bone necrosis; salivary calculi, cysts of sublingual and submaxillary glands.

And the most intense pains may be caused in perfectly normal mouths by an intra-nasal condition irritating reflexly the superior and inferior divisions of the fifth nerve.

177 Post Street.

THE TREATMENT OF INFANTILE PARALYSIS.*

By JOHN CARLING, M. D., Los Angeles.

Before taking up the treatment of infantile paralysis, it might be well to refer briefly to the causes of deformity in this disease. They are: 1. Gravity. 2. The contraction of unopposed muscles. 3. Habitual posture. 4. Functional use.

To illustrate: If the dorsal flexors of the foot are paralyzed, the foot falls forward from the force of gravity plus contraction of the calf muscles. If the foot is not supported, structural shortening sets in and the limb becomes permanently deformed. If, however, the dorsal flexors are intact and the calf muscles are paralyzed the force of gravity is overcome by contraction of the dorsal flexors.

Habitual posture may cause deformity as in complete paralysis when the limbs are placed in certain positions for convenience.

In incomplete paralysis, when the patient begins to use his limbs further deformity is developed by the weight of the body and the attempt of the remaining muscles to do the work of those which are paralyzed.

Subluxation sometimes occurs from relaxation of ligaments around a joint and lack of muscular support, but complete dislocation is rare.

Deformities of the upper extremity are as a rule not so severe as those of the lower, because of the absence of strain due to weight bearing and the fact that gravity is opposed to muscular contraction.

Paralysis of the muscles of the shoulder may cause subluxation of the head of the humerus and paralysis of the muscles of the forearm, distortion of the hand from contraction accommodation and atrophy.

Paralysis of the trunk muscles may cause lateral curvature of the spine. The curvature in these cases is not towards the healthy side as might be supposed, but towards the paralyzed side. This is because the muscles of respiration are involved, producing a caving in of the chest on the affected side and the compensatory enlargement of the chest on the opposite side draws the spine towards it.

In infantile paralysis the extent of ultimate deformity is not limited to the muscles alone, but all the tissues of the affected part share in the atrophy and retardation of growth. It is evident that retardation of growth will be greater during the period of active development, consequently the younger the patient when attacked the greater will be the atrophy and shortening.

TREATMENT.

Active treatment of the paralyzed muscles should not begin until the acute inflammation in the cord has subsided. This may take from one to four weeks or longer and is indicated by the absence of pain and tenderness on handling the limbs. To overcome the tendency to deformity the joints should be manipulated several times daily and the limbs massaged to improve the circulation and nutrition of the muscles.

The galvanic current is of use in obtaining contraction of muscles that cannot be contracted voluntarily. When given alone, however, at irregular intervals it is of little value in restoring function and should therefore be always combined with massage and muscle training. The latter is by far the best means at our disposal for restoring lost power to the disabled muscles. It consists in aiding the patient to perform certain movements with the hope of stimulating impulses from the brain to the weakened or paralyzed muscles.

To illustrate a case: If the dorsal flexors of the foot are weakened and unable to act alone, the foot is dorsally flexed by the hand of the operator and the patient is directed to assist. If there is any response, and there usually is, less and less aid is given by the operator as the power returns. By patient and persistent efforts, muscles which are apparently hopelessly paralyzed, may be trained to perform their functions in whole or in part.

In infantile paralysis a hemorrhagic myelitis has attacked the cord and caused more or less destruction. Certain centers may have been completely destroyed while others may have escaped with only slight injury. Moreover some centers may have escaped injury altogether, but their associate centers having been destroyed and being unaccustomed to act alone, their function is lost unless trained to co-ordinate with other centers. Therefore, there exists in every disabled limb a certain amount of muscular power which is not evident and which cannot be made available unless cultivated. The patient, if a child, should never be left to do his own exercises, but should always be aided by parent or nurse. As the response of a muscle depends on the strength of the stimulus, the volition of the patient is greatly aided by a word of command. The exercises should be given daily under the direction of the physician and should be continued as long as improvement is noticeable. If contractions are present they should be overcome before the exercises are begun as it is impossible to strengthen a muscle until the strain on it has been relieved.

MECHANICAL TREATMENT.

The object of a brace is to prevent deformity due to contraction of the unopposed muscles and at the same time encourage functional use of the limb.

In paralysis of the extensor muscles of the leg, the foot drops forward and drags upon the ground in walking, causing the patient to awkardly lift the

---

* Read before the Forty-sixth annual meeting of the Medical Society, State of California, Coronado, April, 1917.

knee to prevent stumbling. This deformity is known as equinus and when fixed produces over extension at the knee, because of the effort to place the heel on the ground. In more severe cases the patient walks on the ball of his foot, causing flexion at the hip joint. When seen in the early stage before the deformity has become fixed, these cases should be provided with a light brace, with a stop joint at ankle to hold the foot at right angle. In all cases where the knee is weak, the brace should extend to the thigh.

Paralysis of the posterior muscles of the leg causes a deformity known as calcaneus. In this condition the resistance of the foot is lost and the patient walks on his heel. There is also hyper-extension at the knee caused by strain on the weakened ham-string muscles. The indications are therefore a brace with a reverse catch at ankle to prevent dorsi flexion and extending to the thigh to prevent hyper-extension at the knee. In paralysis of the quadriceps extensor, the patient, unable to extend the leg, swings it forward and locks the joint by direct contact of its surface, and by resistance of the tissues on the posterior aspect of the knee. The joint is thus over-extended.

Paralysis of the quadriceps alone is rare and there is usually associated with it paralysis of the leg muscles. In paralysis of the muscles of the hip the result will depend on the individual muscles affected. When the ileopsoas is paralyzed it is impossible for the patient to flex the thigh directly and when the adductors are paralyzed he is unable to bring the limbs together.

When all the muscles of the hip are paralyzed the limb dangles, but usually the tensor vaginae femoris remains intact, producing flexion deformity. As the muscles of the leg are usually paralyzed as well there is great disability accompanied by outward rotation of the limb. In such cases a pelvic band should be attached to the brace with joints at hip and knee to allow flexion in sitting. In young children, however, it is preferable to omit a joint at the knee because of their inability to control it. When both limbs are paralyzed double braces should be applied and the patient furnished with crutches if necessary.

If the muscles of the spine are affected a corset may be attached to the pelvic band to prevent scoliosis or lordosis.

Paralysis of the arm muscles is relatively rare and seldom requires brace treatment. Unlike the leg which may be braced to support the body, the arm when extensively paralyzed is of little service.

OPERATIVE TREATMENT.

Patients with infantile paralysis are usually neglected after the acute stage has subsided and when seen by the orthopedic surgeon, they are found to have various contractions and distortions of the limbs.

The first indication in these cases is the reduction of the deformity. The foot must be brought to a right angle with the leg. The contractions at the knee and hip must be overcome and lateral distortion corrected. Slight equinus may be overcome by forcible stretching of the tendo achillis, but resistant cases will require division of the tendon.

Slight contraction at the knee and hip may also be overcome by forcible stretching under an anesthetic and the application of a plaster cast. In severe cases, however, division of the tendons will be necessary. The tensor vaginae femoris and adductor tendons may be divided subcutaneously, but division of the hamstring tendons should be done by the open method, because of the danger of wounding the external popliteal nerve, which lies close to the inner side of the biceps tendon.

TENDON TRANSPLANTATION.

When one or more muscles are paralyzed the unbalanced action of the others tends to distort the limb. The object of tendon transplantation is to utilize the muscular power that is remaining to the best advantage. The operation should not be performed until every effort has been made to improve the nutrition and strength of the disabled muscles and the final degree of paralysis has been ascertained. As a rule, a period of at least two years should intervene between the onset of the paralysis and the time of operation. It is essential for the success of this operation to have a clear understanding of the deformity and the object to be attained. It will be of little use to transplant a muscle unless its origin is such that it can work to advantage at its new point of attachment. A few examples may be cited to show what may be accomplished.

If the tibialis anticus is paralyzed one may replace it by the extensor proprius hallucis or the peroneus tertius may be divided and its proximal end attached to the tendon of the tibialis anticus or the periosteum on the inner border of the foot or to both. If on the other hand the peroneus tertius is paralyzed, the tendon of the tibialis anticus may be split and its outer half inserted into the outer border of the foot.

Paralysis of the tibialis posticus may be treated by dividing the perineus brevis below the external malleolus and attaching the proximal end to the former muscle. If the calf muscles are paralyzed the tendons of the peroneus longus and brevis may be inserted into the tendo achillis. Other operations will suggest themselves. For instance the sartorius and the tensor vaginae femoris may be transplanted into the quadriceps and the trapezius may be transplanted into the deltoid.

The operation: All contractions must be overcome by tenotomy and stretching before attempting the operation. Having applied an Esmarch bandage, one or more incisions are made, exposing the field of operation. The tendon to be transplanted is then separated from its attachment and all restrictions having been removed it is placed in opposition to the paralyzed tendon and sutured to it with silk.

When there is severe deformity and considerable atrophy of the paralyzed tendons the healthy tendon should be inserted into the periosteum or into

the bone itself. If one is unable to reach the desired point of insertion because of the contraction of the healthy tendon the intervening space may be bridged over with strands of heavy silk after the method of Lange.

Arthrodesis, or the induction of anchylosis, may be combined with tendon transplantation to advantage in many cases. The operation consists in opening the joint and removing a section of cartilage from its opposed surfaces which are then brought together and fixed with sutures. The operation should not be undertaken before the 12th year, because of interference with growth due to a removal of a portion of the epiphysis.

In young children the use of silk ligaments is preferable to arthrodesis, because they do not cause stiffness and distortion of the foot, while allowing dorsal flexion and checking plantar flexion. The silk eventually becomes coated with fibrous tissue and forms a ligament just as the silk prolongation of a transplanted tendon is transformed into a tendon. In severe calcaneo-valgus, which is the most disabling of all deformities, the operations of tendon transplantation and arthrodesis should be combined with astragalectomy for greater stability of the joint.

NERVE ANASTAMOSIS OR NERVE GRAFTING.

The results expected from this operation have not been realized. The earlier operations gave promise of wonderful possibilities through the grafting of a paralyzed nerve into a healthy one or vice versa, but so many failures have occurred that it is no longer to be recommended to patients. In the cases reported as favorable, it is hard to determine whether the improvement was due to neuroplasty or to natural causes. It is possible, however, that with the selection of suitable cases, improvement in technique, and a better knowledge of the minute anatomy and physiology of the nerve fibres to be transplanted, much better results may be looked for in the future.

Unsatisfactory results following operations for the correction of deformity, are often due to failure to provide proper after-treatment.

After simple tenotomy the limb should be incased in a plaster cast, and the patient allowed to go about on crutches. At the end of four weeks the cast may be removed and a light brace applied if necessary.

Following tendon transplantation, arthrodesis and the insertion of artificial ligaments, a cast should be worn for at least four months to avoid strain to the parts, after which a brace should be worn until the muscles have been strengthened and trained to work at their new points of attachment. This may require months of patient and persistent effort, but the results are highly satisfactory and the surgeon is well repaid for the time and labor expended.

PYELOGRAMS OF TUMORS OF THE KIDNEYS.*

By GRANVILLE MacGOWAN, Los Angeles.

Pyelography is sometimes of marked assistance in differentiating doubtful neoplasm or polycystic kidney from inflammatory conditions. The characteristic feature of pyelography is the reproduction of the outline of the pelvis of the kidney and its calyces obtained by this photographic device. The pelvis of the healthy kidney follows a certain familiar outline as do also its calyces.

Any change within the kidney which deforms the pelvis, either by encroaching upon it, or by retraction of it and its calyces will, or should, be visible in the picture. The amount of deformity or change in the shape depends largely upon the volume of the tumor and its position with relation to the pelvis or any particular major calyx thereof. For instance, a small papilloma projecting into, or springing from the walls of the pelvis, without size sufficient to obstruct the pelvis in any way, will not alter the picture from the normal because there will not be any appreciable deformity from it. But, given the condition of development of a neoplasm in one pole of the kidney, this growth will flatten out, or retract, the major calyx in this pole, or it will push into the pelvis and narrow and alter its shape. The greater the size and the more extensive the infiltration of the kidney substance by the neoplasm, the greater will be the change in shape in the pelvis; and, all other things being equal, the more marked will be the deformity shown in the picture. An elongated calyx is not necessarily an unhealthy calyx, because elongation occurs with a certain degree of frequency as a normal condition, but the calyx that is elongated by retraction caused by a tumor, just as a calyx that is elongated by an inflammatory condition such as one finds in pyonephrosis, pyelitis, or infected hydronephrosis, loses the accentuated contour of its minor calyces and changes in shape. We may take it as a rule that where we find in any pyelogram of a kidney, drawn out calyces and elongated and deformed pelves, in the absence of contrary cystoscopic information, we are dealing with a malignant growth. It is true, however, that from time to time one observes renal neoplasms in which dilatation of the pelvis is present and shows in the picture. This is rather suggestive of carcinoma which has passed on to ulceration and destruction of the tissues. In such cases the calyces have usually disappeared. In malignant growths where the renal mass is unusually large and fills up the affected loin, or in very stout people where the kidney lies up underneath the ribs, one sees at times the picture of a kidney pelvis with deformed calyces displaced from its usual position. To get a good picture under these circumstances is fortunate indeed.

I shall not enter into the discussion of differentiation of tumors from stones or from inflamma-

(Continued on Page 141.)

* Read before the Forty-sixth Annual Meeting of the Medical Society of the State of California, Coronado, April, 1917.

SCIENTIFIC PROGRAM FOR GENERAL AND SECTION MEETINGS

The following program is practically complete and the arrangement of the papers will probably remain unchanged. In the April Journal the names of those chosen to open the discussions will appear.

COMMITTEE,
HARRY E. ALDERSON, Chairman,
FITCH C. E. MATTISON,
WALTER V. BREM,
ROBERT A. PEERS, Secretary.

Tuesday Morning, April 16, 1918,

9:00 o'clock.

PRESIDENT'S ADDRESS.
J. HENRY BARBAT.

1. CLINICAL ASPECTS OF THE FASTING TREATMENT FOR DIABETES.
ALBERT H. ROWE.
2. THE TREATMENT AND LABORATORY CONTROL OF DIABETES.
LOVELL LANGSTROTH.
3. METABOLISM IN DIABETES, NEPHRITIS AND CHOLECYSTITIS.
LORENA M. BREED.
4. THE KARELL CURE REVIVED.
NATHANIEL B. POTTER.
5. COMPARATIVE STUDIES IN ESTIMATING ACIDOSIS.
ARTHUR STANLEY GRANGER.

Tuesday Afternoon,

2:00 o'clock.

1. THE PREVALENCE OF STREPTOCOCCAL INFECTIONS.
RACHEL ASH.
2. EXPERIMENTAL TYPHOID CARRIERS.
K. F. MEYER.
3. RADICAL CURE OF AMEBIASIS WITH COMBINATION OF EMETIN HYDROCHLORIDE AND NEOSALVARSAN OR ALLIED PRODUCTS.
HERBERT GUNN.
4. SCHISTOSOMIASIS IN CALIFORNIA.
ALFRED C. REED.
5. THE VALUE OF RENAL FUNCTIONAL STUDIES IN THE PROGNOSIS AND TREATMENT OF NEPHRITIS.
SAMUEL W. HURWITZ.
6. THE ENFORCEMENT OF THE MEDICAL PRACTICE ACT IN CALIFORNIA SINCE 1912.
HARRY E. ALDERSON.

Wednesday Morning, April 17, 1918

9:00 o'clock.

1. VINCENT'S ANGINA WITH A REPORT OF AN UNUSUAL CASE.
JOSEPH M. KING.
2. INTESTINAL OBSTRUCTION.
HARLAN SHOEMAKER.
3. RECONSTRUCTION OF THE HIP-JOINT.
ELLIS W. JONES.
4. BLOOD TRANSFUSIONS, INDICATIONS FOR AND RESULTS.
A. H. ZEILER.
5. AUTOGENOUS COLON VACCINES IN TOXIC ECZEMA.
JAMES A. JACKSON.
RAWSON J. PICKARD.
6. PITFALLS IN THE DIAGNOSIS AND TREATMENT OF SENILE HYPERTROPHY OF THE PROSTATE. ITS CONSIDERATION FROM THE GENERAL PRACTITIONER'S STANDPOINT.
W. B. DAKIN.

Wednesday Afternoon,

2:00 o'clock.

WAR PROGRAM.

1. THE SUPPRESSION AND CONTROL OF VENEREAL DISEASES IN THE ARMY THROUGH MILITARY AND CIVIL CO-OPERATION.
COLONEL L. MERVIN MAUS,
Medical Corps, U. S. Army, Dept. Surgeon, Western Dept.
2. VENEREAL DISEASE CONTROL IN CALIFORNIA.
HARRY G. IRVINE.
3. DISCUSSION OF EXPERIENCES OF MEDICAL ADVISORY BOARD No. 5 (DRAFT REGISTRANTS).
GEORGE H. EVANS,
HARRY M. SHERMAN,
S. H. HURWITZ,
FRANK HINMAN.
4. AFTER-TREATMENT AND REHABILITATION OF THE WOUNDED (WITH DEMONSTRATION OF IMPROVISED APPARATUS AND LANTERN SLIDES).
LEO ELOESSER.

Thursday Morning, April 18, 1918,

9:00 o'clock.

1. AN ANALYSIS OF THE FIRST TWO HUNDRED CASES STUDIED AT THE SAN DIEGO DIAGNOSTIC GROUP CLINIC.
B. J. O'NEILL.
ROBERT POLLOCK.
2. THE DIAGNOSTIC VALUE OF THE LUNG REFLEXES IN PULMONARY TUBERCULOSIS.
F. M. POTTENGER.
3. THE INTERRELATIONSHIP OF ASTHMA AND PULMONARY TUBERCULOSIS.
PHILIP H. PIERSON.
4. SYPHILIS OF THE THYROID GLAND—REPORT OF A CASE.
EDWIN H. SCHNEIDER.
5. THE PREVENTION OF CONGENITAL SYPHILIS BY INTENSIVE TREATMENT OF SYPHILITIC MOTHERS DURING PREGNANCY.
HANS LISSER.
6. INTESTINAL OBSTRUCTION—CLINICAL AND EXPERIMENTAL OBSERVATIONS.
G. H. WHIPPLE.

Thursday Afternoon,

2:00 o'clock.

1. BLOOD REGENERATION AFTER SIMPLE ANEMIA AS INFLUENCED BY DIETARY FACTORS.
   C. W. HOOPER,
   G. H. WHIPPLE.
2. A STUDY OF ACHYLIA GASTRICA BY THE FRACTIONAL METHOD.
   E. C. FISHBAUGH.
3. BLOOD PRESSURE STUDIES ON 300 NORMAL MEN BETWEEN THE AGES OF 19 AND 33 YEARS.
   BERTRAND SMITH.
4. THE PREVENTION OF POST-OPERATIVE GAS PAINS.
   W. C. ALVAREZ.
5. PRACTICAL INFANT FEEDING; POINTS WHICH THE GENERAL PRACTITIONER SHOULD KNOW.
   LULU H. PETERS.

PROGRAM OF THE SECTION OF OBSTETRICS AND GYNECOLOGY.

Tuesday Afternoon,

2:00 o'clock.

1. THE TREATMENT OF FIBROIDS BY X-RAY.
   HENRY J. KREUTZMANN.
2. CESARIAN SECTION, INDICATIONS AND TECHNIQUE.
   LYLE G. McNEILE.
3. RESULTS FOLLOWING OPERATIVE TREATMENT OF PELVIC INFLAMMATORY DISEASE IN THE STANFORD UNIVERSITY CLINIC.
   JOHN A. SPERRY.
4. CONSTRICTED BLADDER IN WOMEN.
   J. CRAIG NEEL.

Wednesday Morning,

9:00 o'clock.

1. ELECTION OF OFFICERS.
2. PUBIOTOMY.
   H. A. STEPHENSON.
3. TREATMENT OF INOPERABLE UTERINE CANCER.
   FRANK W. LYNCH.
4. RADIUM IN THE TREATMENT OF UTERINE CANCER WITH CASE REPORTS.
   REX DUNCAN.

PROGRAM OF UROLOGIC SECTION.

Tuesday Morning, April 16, 1918.

1. THE DIAGNOSTIC SIGNIFICANCE OF TUBERCLE BACILLURIA.
   LEWIS M. CHELSEN.
2. THREE CASES OF HEMATURIA TO ILLUSTRATE THE VALUE OF SCIENTIFIC METHODS IN ASCERTAINING THE CAUSATIVE FACTOR.
   G. SHEARMAN PETERKIN.
3. GENITO-URINARY DISEASES IN WOMEN.
   WM. E. STEVENS.
4. A PLEA FOR A COMPLETE UROLOGIC DIAGNOSIS AT ONE SITTING.
   MARTIN KROTOSZYNER.
   GEO. W. HARTMAN.

Tuesday Afternoon.

1. SEMINAL VESICULOTOMY IN THE TREATMENT OF GONORRHEAL RHEUMATISM.
   JAMES R. DILLON.
2. SOME EXPERIENCES IN THE TECHNIC, PRE-OPERATIVE AND POST-OPERATIVE TREATMENT OF SUPRAPUBIC PROSTATECTOMY CASES.
   HERBERT A. ROSENKRANZ.
3. DIAGNOSIS AND TREATMENT OF GLANDULAR OBSTRUCTION AT THE NECK OF THE BLADDER.
   LOUIS CLIVE JACOBS.
4. ULCER OF THE BLADDER.
   ARTHUR B. CECIL.

Wednesday Morning, April 17, 1918.

1. DIVERTICULA OF THE URINARY BLADDER WITH SOME ASSOCIATED CLINICAL AND PATHOLOGIC CONDITIONS, ILLUSTRATED BY PYELOGRAMS.
   M. MOLONY.
2. EXPERIMENTAL RENAL INFECTION CARRIERS.
   KARL FREDERICK MEYER.
   FRANK HINMAN.
3. ACUTE AND SUB-ACUTE UNILATERAL INFECTIOUS SURGICAL NEPHRITIS WITHOUT PYURIA FROM THE AFFECTED SIDE.
   ROBERT V. DAY.
4. FOCAL RENAL INFECTIONS.
   LEON JOSEPH ROTH.

PROVISIONAL PROGRAM OF NEUROLOGIC SECTION.

1. PROGNOSIS AND TREATMENT OF CENTRAL NERVOUS SYSTEM SYPHILIS.
   R. W. HARVEY.
2. THE PASSAGE OF DRUGS FROM BLOOD SERUM TO SPINAL FLUID.
   H. G. MEHRTENS.
3. PERSONAL EXPERIENCES WITH THE MENTAL RATING TESTS IN ADULT NEUROLOGICAL CASES—WITH CASE REPORTS.
   MR. ARTHUR RITTER.
4. SPINAL FLUID FINDINGS IN HERPES ZOSTER.
   W. F. SCHALLER.

PROVISIONAL PROGRAM, EYE, EAR, NOSE AND THROAT SECTION.

Symposium on Relation between Pathologic Brain Conditions and Eye, Nose and Throat.

1. OPHTHALMOLOGIC ASPECT.
   WM. F. BLAKE.
2. OTO-LARYNGOLOGIC ASPECT.
   H. B. GRAHAM.
3. NEUROLOGIC ASPECT.
   W. F. SCHALLER.
4. SURGICAL ASPECT.
   EMMET RIXFORD.
5. INTRACRANIAL COMPLICATIONS OF DISEASES OF THE EAR, NOSE AND THROAT.
   HILL HASTINGS.

1. TONSILLECTOMY IN SYSTEMIC DISEASES.
J. A. BACHER.
2. REPORT OF UNIQUE EYE CASES.
V. HULEN.
3. EYE QUALIFICATIONS FOR AVIATION CORPS.
W. S. FRANKLIN.

1. TITLE LATER.
K. PISCHEL.
2. EAR TESTING BY BARANY METHOD.
F. A. BURTON.
3. CLINICAL RESULTS FOLLOWING PROPHYLACTIC TREATMENT WITH SILVER NITRATE FOR BLENNORRHEA NEONATORUM.
A. B. SPALDING.
4. NASAL REFRACTURE.
L. L. STANLEY.

1. TREATMENT OF DIPHTHERIA CARRIER WITH ESPECIAL REFERENCE TO TONSILLECTOMY.
F. E. DETLING.
2. GRANULOMA OF THE LARYNX.
MACKENZIE BROWN.
3. A REPORT OF TWO CASES OF SARCOMA OF THE CHOROID.
B. F. CHURCH.
4. DRUGS IN RELATION TO EAR, NOSE AND THROAT TREATMENT.
H. Y. McNAUGHT.

(Continued from Page 138.)

tory conditions, because that is not the subject on which I am desired to speak. In the period antedating the past two years when colloidal silver preparations were used, the wisdom of employing pyelograms in making a differential diagnosis in extensive tumors was open to criticism because it was frequently painful and sometimes dangerous, for the silver solution may act as a decided irritant or a caustic where not drained promptly from the pelvis and its calyces. But such an objection does not now hold, for almost all use solutions of thorium for this purpose, and I have never seen thorium do any harm to the kidney tissue, nor any ill effects follow its use. If there is a tumor like mass in the renal region, palpable, and cystoscopic diagnosis is not clear, a pyelogram showing a normal pelvis and calyces will certainly rule out the assumption of malignant growth. In renal hematuria where it is doubtful whether the condition is a hydronephrosis, a true new growth, an inflammatory condition, or "essential hematuria," pyelograms are very necessary as a diagnostic measure. In polycystic kidneys the pyelogram is very apt to resemble or suggest at times a condition of hydronephrosis and at other times, more particularly where some of the cysts have become infected, that of pyonephrosis. There is nothing about the character of the pelvic deformity which is absolutely diagnostic, but the pictures are of value with the cystoscopic findings and the history.

The first case is an enormous diffuse carcinoma involving practically all of the kidney substance, occurring in a woman of forty who came under my observation on the first of September, 1915, for primary and secondary syphilis, and who received intensive treatment until May, 1916, when she was cured, because her blood and spinal Wassermann tests became negative and remained so until the time of her death. On September 1, 1916, she called my attention to a lump in her left side which seemed to be an enlarged and hardened spleen; the liver was also enlarged and painful. Naturally, with the history I suspected a luetic origin for these troubles, but there was nothing to indicate it in the blood, nor were there any other signs of lues. The tumor was ascertained to be retro-peritoneal. At the first cystoscopic examination, on September 15, I could not advance a No. 5 catheter more than 2 cm. into the right ureter. Phenolsulphonephthalein appeared on the right side in five minutes and on the left in three minutes. A pyelogram was taken with the cystoscope in place, but evidently the thorium did not pass the obstruction as there was no shadow in the picture. On the 26th of September, I passed No. 4 and 6 bougies up the right ureter to the kidney pelvis without trouble. A No. 5 catheter would not pass. On the third of October I succeeded in passing a No. 6 catheter into the ureter 3 cm. On the ninth of October, I passed a probe pointed No. 6 to the kidney pelvis but without obtaining any urine through it. Only 3 c. c. of thorium solution could be introduced before distention caused very great pain which lasted twenty-four hours, after which she passed a long ureteral clot. The ureter entered the narrow elongated pelvis about the level of the top of the third lumbar vertebra. The pelvis was deformed by being encroached upon in all directions and had lost all semblance to the usual funnel shape. The major calyx of the lower pole was retracted and extended perpendicularly to the longitudinal renal axis, its minor calyces had lost their contour. The superior calyx was also elongated and at its upper end there was a cup-like expansion, the minor calyces had disappeared. These deformities also appear in the kidney specimen. The pelvis and calyces are encroached upon and almost obliterated by the growth. This case well illustrates the rapidity with which a kidney can be destroyed by a neoplasm. At the first cystoscopic examination made I saw two spurts of urine coming from the right side and phthalein showed in five minutes. At the subsequent cystoscopic examination I could not obtain any urine. The tumor which was removed on October 16, showed practically complete destruction of the kidney substance by the infiltrating carcinoma.

The next case is the pyelogram of the left kidney from a man of 59, a patient of Dr. E. C. Moore who gave a history of recurrent attacks of pain in the lower abdomen accompanied by hematuria, lasting about six months. On operation, April 10, 1914, a hypernephroma was found. You will notice the narrowing of the kidney pelvis, the absence, or retraction, of the image of the ureter below the third lumbar vertebra and the elongation and retraction of the caudal major calyx. The minor calyces, two of them, can still

be seen at the end of the major calyces. The central major calyx has disappeared, the upper or superior calyx is elongated, retracted; and, between the eleventh and twelfth ribs appears an expansion which looks crescent shaped but when examined very carefully shows that there has been a rounding and flattening of the minor calyces which have disappeared, and that a cavity has been formed very much like that in the first picture, only it is imperfectly distended with the thorium solution. In neither of these radiographs is there any resemblance to other picture conditions found in kidney work.

The next case, a patient of Dr. Arthur Cecil, a woman aged 32, with a large lobular mass in each loin; albumin in the urine and total phthallein output of 20% in the first hour. The left ureteral shadow stops short at the level of the second lumbar vertebra, and the image of the pelvis appears very irregular with the calyces elongated and flattened and with a considerable collection of the injecting fluid at the level of the eleventh rib standing out very clearly. The image of the catheter on the right side is within the shadow of the pelvic bones, but one sees two distinct zones of the kidney pelvis, irregular and triangular, appearing first at the level of the middle of the body of the fourth lumbar vertebra. The calyces have disappeared, and outside, one at the level of the third lumbar vertebra and one directly above the crest of the ileum, are spaces that are filled with the injecting fluid. In this case, which was not operated, the diagnosis of polycystic kidneys was entirely justified because there is nothing about these images distinctive of inflammatory conditions of the pelvis, and nothing to indicate a hydronephrosis.

The next is a picture of a neoplasm removed by Dr. William Edwards and subsequently injected with collargol, which shows very plainly the deformity occasioned by the ingrowth of the tumor tissue into the pelvis of the kidney and the flattening and gradual disappearance of the calyces, both major and minor.

The next slide is also one of Dr. Cecil's, a man of 41 who had complained of pain in the right side, and blood in the urine; onset six weeks before operation. Phthalein appeared on the right side in nine minutes; left side in six. For the first thirty minutes, right 4%, left 27%. This pyelogram shows an infiltration of the lower pole of the kidney and in three distinct places, distention of the ends of the calyces. The upper portion shows the fluid used for injection entering into enlarged cavities,—portions of the pelvis of the upper pole, and lower distended calyces, a hydronephrotic condition evidently of this end of the kidney probably due to the pressure upon the ureter of the tumor in the lower pole.

The picture following is a drawing of this condition and shows how perfectly the photograph conforms to the actual condition and what valuable information may be obtained by pyelograms in doubtful cases of this kind. You will also see a small stone situated between the two lobes of the cut tumor. The tumor proved to be a Grawitz.

Book Reviews

A Manual of Anatomy. By Henry E. Radasch, M. Sc., M. D., Assistant Professor of Histology and Embryology in the Jefferson Medical College, Philadelphia. Octavo of 489 pages with 329 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Cloth, $3.50 net.

There is always use for a good manual of anatomy, one that states concisely and clearly the anatomical facts, not too briefly or too lengthy, but with a completeness that leaves the impression that essentials have not been sacrificed.

The present volume fulfills these requirements quite well and will be found very helpful in refreshing the memory and in reviewing. On the whole the illustrations are good, especially those of the chapters on osteology and syndesmology; many are rather diagrammatic, but this is more often advantageous than otherwise. Figures like 171 are not clear even as regards gross points and are therefore disappointing. The work can be recommended to students and practitioners. F. E. B.

Pharmacology, Therapeutics and Preventive Medicine. Edited by Fantus & Evans. Practical medicine series 1917, vol. 8. Chicago: Yearbook publishers. 1917. Price, $1.50.

General therapeutic technic. Etiotropic therapy. Restorative therapy. Symptom therapy. Toxicology. War time economy in drugs. Non-pharmacal therapeutics. Physician and public health work. General sanitation. Personal hygiene. Climate and health. Inspection school children. Infectious and contagious diseases. Occupational diseases. Military hygiene.

Obstetrics. Edited by DeLee and Cary. Practical medicine series 1917. Chicago: Yearbook publishers. Price $1.35.

Pregnancy. Labor. Puerperium. New-born. Obstetrics in general.

Preventive Medicine and Hygiene. By Milton J. Rosenau. 3rd edition, containing special section on military hygiene. N. Y.: Appleton. 1917.

The third edition of Rosenau's work makes a timely appearance, especially as it embraces a section on military hygiene and is adapted to meet the present emergency. The entire work though, is a "war book" in its broadest sense, and presents revised and new material. The pages on military hygiene embrace instructions for the examination of recruits, the organization of military and medical units with special reference to the organization of the sanitary corps, the sanitary management of troops on the march, in trench or barracks, and personal hygiene of the individual soldier. The organization and management of base hospitals and the Red Cross are considered in detail. New diseases arising from the conditions and methods of modern warfare are discussed, such as trench fever, trench foot, war nephritis, shell shock, gas poisoning, etc. Tuberculosis, venereal diseases, and diseases common to camps and unfavorable conditions are discussed from the efficiency and prophylactic viewpoint.

Rosenau's work needs no commend—suffice to say that it stands alone as a book on sanitary and prophylactic medicine and is almost encyclopedic in its scope. The communicable diseases are classified and presented according to their usual transmission channels. Mental hygiene is given by Dr. Thos. W. Salmon. An extensive section on immunity, heredity and eugenics appears. Possibly too much space is devoted to immunology for a work of this character—few textbooks on bacteriology are as comprehensive. Environment and what we eat and drink are of

course extensively discussed. Sewage disposal is given attention by Whipple; vital statistics by Trask. Occupational diseases and industrial hygiene occupy a section—also schools and disinfection. E. A. V.

Theoretical and Applied Colloid Chemistry. By Wolfgang Ostwald. Authorized translation from German by Martin H. Fisher. New York: Wiley. 1917.

This is an elaboration of a series of lectures delivered by Dr. Ostwald before a number of American universities and societies during the winter of 1913-14. In hardly more than a half score years colloid chemistry has grown to be the giant of the chemical sciences. The first lectures deal with the fundamental properties of the colloids, their classification and their changes in state. All mystery concerning the colloids is dissipated and the colloids clearly established as standing midway between the mechanical suspensions and the molecular dispersed solutions. Of medical interest is the portion devoted to biology and pathology. Here the biologist has an open sesame to the mysteries of life. "All life processes take place in a colloid system." Living protoplasm is a colloid. Fischer's theory of edema is sustained in that the increased swelling and water content is brought about by an electrolyte action upon the plasma colloids. This theory has been attacked, but this attack is disarmed by the process of "syneresis." Syneresis is the property of gels, under thermal or chemic influences, to "weep" or "exude" a portion of itself in a fluid state. All the processes of life, embryonal development, growth, muscular contractions are expressed in terms of colloid reaction. Vital staining and synthetic biology are explained and made plausible. The book is a wonderfully lucid exposition of colloid chemistry. Every statement is substantiated by physical demonstration. I desire also to pay my respects to Martin Fischer, the translator. Neither in construction nor mode of expression is there a suggestion of the work being written in a foreign tongue. Not once from cover to cover, is there a quoted German word for want of an equivalent in our own language. E. A. V.

Clinical Treatise on Diseases of the Heart for General Practitioner. By Edward E. Cornwall. N. Y.: Rebman. 1917. Price, $1.50.

This volume is an excellent and terse primer for those who want to get the worn-out and incorrect attitude with which diseases of the heart were approached up to about fifteen years ago. It puts in readable and well tabulated form the old conceptions by which heart disease was judged according to murmurs and their exact time and place in the cardiac cycle. The later and more intelligent conceptions of adjudging heart disease from the point of view of the various functions of the heart muscle is given recognition hardly more than in passing. The writer betrays either serious ignorance of, or culpable misbelief in, the modern work which has done so much to lead us more intelligently in the treatment of cardiac disorders. To say, in speaking of paroxysmal tachycardia, that "the contractions are, in reality, extra systoles, and, possibly in some cases, may be produced by auricular fibrillation," betrays a woeful unfamiliarity with the pathology of this condition, and if this statement of the author's were accepted on faith one would feel sorry that the book were written. Furthermore, the enunciation as a dogma that the digitalis group is contraindicated in mitral stenosis makes one really feel that something ought to be done in the way of compelling a man to be licensed before he is allowed to have a book published.

The book is bound in Rebman gray, and the title is printed in a striking black along the outer side. This may make the book an attraction to some people. H. I. W.

Diseases of Women. By Henry Sturgeon Crossen. 4th edition. 1160 pages. 800 engravings. St. Louis: Mosby. 1917.

This practical and well-written book, while especially valuable to the general practitioner, has also its place in the library of the specialist in gynecology. There is no attempt to go into the technic of major surgical operations, but the book includes discussions of the conditions which necessitate operation and the preparation and after care of surgical cases as well as medico-legal problems.

The subject-matter is thoroughly up-to-date, the material is well arranged, and it is seldom that we find a subject treated in so clear, concise and comprehensive a manner. The illustrations, which are numerous, are particularly good and are a distinct aid to the text. There is added to this new fourth edition a chapter on the internal secretory glands in relation to gynecology by Dr. Hugo Ehrenfest, professor of gynecology and obstetrics in St. Louis University. This chapter is an instructive presentation of our present knowledge concerning the relation of the ductless glands to gynecology, and is a valuable addition to the book. M. A. S.

Correspondence

BOARD OF MEDICAL EXAMINERS.

San Francisco, California,
December 28, 1917.

To the Editor:

Dear Sir:—A matter of vital importance to the public and to the medical profession has arisen in connection with the status of the College of Physicians and Surgeons of San Francisco, and we feel at this time we should acquaint the readers of the Journal with certain salient facts bearing upon the recognition of the graduates of this institution afforded by the Board of Medical Examiners as well as the facts leading up to the recent investigation of the institution made by a special committee of the Board appointed by President P. T. Phillips in an official communication dated early in November and which is made a part of the committee report on the College.

The minutes of the Board of Medical Examiners show:

(1) That graduates of the College of Physicians and Surgeons have been admitted to examination by Boards of Examiners prior to 1913.

(It is a well known fact that many well qualified and successful alumni of the P. & S. are now practicing in California.)

(2) That the first report of the College Investigating Committee filed by Dr. H. E. Alderson under date of June 15, 1914, recommended temporary approval of the College of P. & S., San Francisco, without comment.

(3) That the 1915 College Investigation Committee report submitted by Dr. W. R. Molony suggested certain improvements in the teaching faculty as well as equipment of the school and recommended approval for one year during which time the suggested improvements were to be effected.

(4) That June 29, 1916, Dr. A. M. Smith as chairman of the College Investigation Committee, recommended approval of the school for an additional period of six months, stating therein that certain improvements recommended in a prior report had not been made.

(5) That certain improvements were made in 1916, and the January 1917 report recommended additional improvements, approving the institution until the middle of 1917.

(6) That subsequently the attention of Presi-

dent Phillips was called to certain statements evidencing an apparent retrogression at the College of P. & S. in course of instruction, attendance at lectures, etc., and a committee was then appointed as above noted, to file a comprehensive report with the Board.

This report has been compiled and at the present time is under consideration in Los Angeles, awaiting the vote of each member of the Board. Until this vote is recorded I deem it inadvisable to make public the findings, trusting that an opportunity may be afforded to devise ways and means of providing courses of instruction which will better qualify the students to fulfill the requirements of the California Medical Practice Act as well as to better fit them to treat the public.

There has been a change in the Dean of the institution initiated by the Faculty. The new Dean reports the installation of a new full time man in laboratory course, but the Trustees have not advised the Board of any further changes nor any prospective plans.

The Board of Medical Examiners will be prompt to act when conditions are called to their attention warranting the disapproval of a school and the problem now presenting itself must be solved by the determination as to how to provide the proper instruction for the students that they may fulfill the conditions imposed by law and that they may be qualified to treat the sick and afflicted.

May I respectfully request as executive officer of the Board of Medical Examiners that for the purpose of equitably placing questions of this nature before the medical profession, the undersigned be granted the courtesy of reading articles for publication bearing upon matters of interest to the Board of Medical Examiners, that opportunity of reply be offered, thus obviating the possibility of misinformation on subjects so vital to all concerned.

Respectfully yours,
CHARLES B. PINKHAM,
Secy.-Treas.

January 14th, 1918.

Dr. Chas. B. Pinkham, Secretary,
State Board of Medical Examiners,
Forum Building, Sacramento, Cal.

Dear Dr. Pinkham:

Your letter of December 28th has remained unanswered because of my absence from the city.

In that letter you advise me of various committee reports in the Board of Medical Examiners bearing on the College of Physicians and Surgeons of San Francisco. It seems to me that the public and the medical profession are little, if at all, concerned with the internal administrative arrangements of the Board, but that both the public and the medical profession are vitally concerned with those actions of the Board which are matters of public record.

You indicate in your letter that the Board has approved this college up to the present. I am in no way concerned with the means whereby the Board arrived at this conclusion. I am concerned, however, that whereas the California Board has approved this college, 39 other State Boards are reported to have refused to admit its graduates to examination; that the Army has refused medical recognition to its graduates and students, and that it has again been confirmed in Class C. rating by the Council on Education of the American Medical Association.

Furthermore, I am concerned over the fact that the three conditions enumerated above, one and all, preceded action by your Board, designed to force improvement or closure of this college.

Regarding the last paragraph of your letter, wherein you request the courtesy of reading articles designed for publication in the Journal so far as they relate to the Board of Medical Examiners, it will be a pleasure to accede in the future even more than in the past. Such editorials have already been submitted to Dr. Phillips at the original suggestion of the editor.

May I call your particular attention to the editorial entitled "Oral Examination for Medical Licenses" in the December issue, which was read in manuscript by Dr. Phillips who asked for the omission of a paragraph which he had himself previously suggested. The change was made and the editorial was again read by Dr. Phillips in galley proof and commended, Nevertheless, at the meeting of the Council of the State Medical Society in November, in Los Angeles, it is my understanding that Dr. Phillips expressed the opinion that this editorial was unfortunate, but, nevertheless, he was willing to let it stand.

I must insist, therefore, that the editor of the Journal be given the same privilege which you ask for the Board of Medical Examiners—i. e., the opportunity of replying to criticism of the Journal policy or contents arising from the State Board of Medical Examiners.

You imply in the last sentence of your letter the possibility of misinformation in material appearing in the Journal relating to the State Board. May I ask you explicitly if any such instance has occurred during my editorship?

Very truly yours,
ALFRED C. REED,
Editor.

EXCERPTS FROM LETTERS OF DR. GEO. J. McCHESNEY TO DR. HARRY M. SHERMAN, SAN FRANCISCO.

New York City.

Nobody told us that we should have our three typhoid injections before sailing. In fact can't sail without them. . . Goldthwaite hustled us all out of Washington up here to hear a lecture by Carrel on his famous technique. We rendezvoused at the Rockefeller Institute yesterday only to find he had expected us a week ago. We had a good talk from his assistants however. Finally the order, signed by the Sec. of War in Goldthwaite's presence, for us to go never reached the Commanding Officer at Port of Embarkation and that may delay us. However, we meet Goldthwaite daily at the Harvard Club and are keeping ourselves in readiness to sail at a moment's notice. When? God knows. Am stocking up with bedding roll, waterproof and mattress and couple of army blankets, overcoat, army slicker, ready made uniform, woolen underwear, sweaters, socks, etc., etc. . .

Brackett and Goldthwaite have desks in the Mills Building just beyond the Army and Navy Building. Fassett of Seattle, Cilley of N. Y., Dunlap of Wash., are captains, about ten altogether. Goldthwaite goes with us.

The trouble with the Carrel technique is that the Sol. deteriorates rapidly, has to be made up fresh every 24 hours and titrated to get it exactly neutral and a certain strength. Will send you details of it when I am settled and have more time.

The people here do not seem to be so excited over the war as I had been led to expect. They stare at me more here than in S. F. and one does not see the uniform nearly so often. People here guess two years more of the war. Cheerful!

New York, Oct. 8, 1917.

Well, I am not allowed to tell when I am sailing, from where, where to, or what, or anything about the trip over such as attacks real or imaginary. (The last is verbatim.) However, I will say that the date is imminent to say the least. . . One does not see as many uniforms on the street here as in S. F. They are down at the Long Island training camps.

Saw Ely for a moment this A. M. Said he had been straightened out and would be able to go with

the contingent. Goldthwaite says we are an orthopedic contingent or group and not a unit, as Pershing has requested that no more units be sent over for the present. This explains several things. Have not stepped inside a hospital except the Rockefeller Institute the first day. None of the men seem to have done so or felt like it as we were so unsettled reporting to Hoboken every day getting outfits, etc.

France, Nov. 3, 1917.

Am settled in France at last. My stay in England was quite brief, only awaiting orders in London for transportation to my present station which is with the St. Louis Base Hospital at Rouen, to observe the acute side of orthopedics in preparation for similar work in U. S. orthopedic hospitals when established.

We had an uneventful though slow and tedious trip across. Was not seasick at all. We waited five days in London for assignment by the British to British hospitals. With Col. Robt. Jones the first night at Officers' Overseas Club. He seems quite simple-minded and pleasant, and from all accounts has quite come into his own now in British medical circles. There were no air raids while I was there, though a big hole in Piccadilly, just west of the circus and half a mile from my hotel, was still unrepaired, and on my last night we were warned, but the raiders were repulsed at the coast. London is as dark at night as a one-horse village, though theaters are purposely kept going busily. One must not raise a window shade unless the light of the room is out, etc. One sees very few smartly dressed people, no smart autos or equipages, the streets are dirty and London is generally seedy. The shops are full, however, and everything is high priced, especially woolen underwear which I was told would be cheap.

When our orders came we were scattered from Aberdeen to Rouen. Fassett of Seattle went to the former, Ely to Liverpool, probably to do path. work with Cone, others to Leeds, Glasgow, Oxford, etc. Baldwin remains at Edinburgh, and Dignan, who used to assist Barbat, is at Cardiff or Bristol. Four orthopedic captains and 6 lieutenants came to France, and a rough crossing we had, I can tell you. Again I held my own, though with difficulty for a while. The train service in France is absolutely miserable and we were from 1 a. m. to 12 the next day coming here. I have an assistant in a 6 ft. 4 Mississippian who is just through a Pittsburgh hospital interneship. He rooms with me in a little canvas cabin.

The other orth. captains were distributed among the Lakeside or Cleveland unit near here and the N. Y. Presbyterian and the Philadelphia units, all running services of beds for British wounded. Now as I understand the proposition it is like this. By arrangement with Gen. Gorgas, orthopedists are to handle all joint injuries, acute as well as chronic, as it is not deemed fair that the general surgeon should see the wound through closure and then call upon the orthopedist to correct malposition and contractures and loosen up adhesions, etc. If the surgeon is not able to do it, the orthopedist should handle the case from the start, and it is so ordered. Also he is given the care of stumps and getting of artificial limbs. Hence, in England the men are familiarizing themselves with the chronic joints, adhesions, malunions, nerve injuries and stump prostheses, while we in France are to wise up on the acute phases of injuries 2 or 3 days old and on for a month or more. The fractured femurs are kept here till united, other injuries till able to stand a difficult channel trip or able to go back to the line without having to go to "Blighty" which is the soldiers' "War Heaven." The "Blighty" smile is an institution here, seen when the Tommy is told his wound will require his going to England.

Orthopedic hospitals are to be established back of the U. S. troops, and we men in training here are supposed to be the men to man them if they do not become so indispensable to the British that they can not be detached. Goldthwaite will see to the erecting and organizing of these, assisted by Majors Osgood in England, and Allison (formerly with this unit) in France. We men in France understand our present assignments are temporary for a month or two, but time will tell. At any rate, I am with a bunch of very nice chaps, headed by Major Fred Murphy. Have already four tents containing 14 beds each under my care, with more general than orthopedic cases so far, but that will be remedied gradually.

The Carrel Dakin technique is only partly carried out here. The tubes are used but the Sol. is not carefully prepared which is most important and the bacterial counts are not made. Eusol packs are very common—i. e., wet dressings of a "near Carrel" Sol. moistening the wound every 2 to 4 hours. They do not use B I P P, the paste of Bismuth, Iodoform and Paraffin which is slapped into wounds quite extensively at the C. C. S. or Casualty Clearing Stations. It may have its place as an emergency or time saving measure. Jones' splints are used almost exclusively and plaster paris not at all. It cannot be procured here. The former are really excellent for a cheap, simple splint, which allows easy access to dressings and are easy to apply. All necessary in war surgery near the front.

Goldthwaite says a manual is being prepared at Washington which will be the Bible for American Military orthopedists. It will include Jones' splints, some plaster and adherence to the Carrel technique. You may have a copy yourself by this time.

I have been here three days and every day a convoy of 100 wounded have been sent here from the Passenchaele front, our ops. range from 10 to 15 per day. I have done 2 already. The surgery is far from minor, I can assure you. It gives one a fresh idea of the horror of the business to see 100 come in, cold, wet, in pain or worse, all young, strong men and they are not rushed here now. I hear several units are not being used by the British and hence are absolutely idle and that Pershing has ordered that no more come over for the present. Hence the delays and heart burnings at home. I certainly am lucky so far.

France, Nov. 14th, 1917.

The British Tommy everyone says is an ideal patient, with his stolidity and bulldog grit. The Australians carry on to a certain point and then turn their faces to the wall with a "Kismet," from association with far easterners, probably. The Canadians stay with it for a time, "get their wind up" (Br. slang for going into a funk) and then come through and stick it out. But the Tommy just stays with it from start to finish and gives as little trouble as possible. This is told me by our C. O. Major Murphy.

France, Dec. 6th, 1917.

The Am. Hospital as we are told will be composed of nine separate units representing as many specialties. Now war practice as we, or rather these St. Louis men, have seen for 6 mos. is about 4/5 general surgery and general medicine, and for every group of base hospitals such as they have here at Rouen one small eye, or g. u., or skin, or nose and throat hospital will be associated. This is the British plan evolved after 3 years of hard experience. The St. Louis men agree with it and say the U. S. hosp. plan will make too many subdivisions of a hospital and lead to confusion. The oculist, nose and throat men here do 4/5 general

surgery. I do general surgery and orthopedists must expect to have to do it although their function is a definite one and will make a respectable subdivision if they are to handle all injured joints. Well, we shall all see.

There are two general cases that form the bulk of operated cases and we have been doing 20 to 30 a day during this Cambrai push. One is for missile fragments that have not yet caused much inflammation, the other is for (1) beginning cellulitis, or (2) opening up pus cavities, or (3) beginning gas bacillus infection, or (4) cutting away necrotic muscle in wounds that have come in without being dressed for several days. In all this latter group, side incisions, free counter openings, decisive surgery is necessary. Two days ago I had such a case coming under the head of (4), cut away large chunks of the Gastrocnemia, part of the soleus, etc., in an incision from the tendo Achilles to the knee. Then I inserted half a dozen Carrel tubes, put on a large cold Eusol pack with oil silk and had the tubes irrigated with cold Eusol every 2 hours day and night. Have dressed him daily since and his temp. comes down steadily. We are closing no wounds a la Carrel but they certainly "clean up" nicely under Carrel tubes into the bottom of the wound under the gauze and irrigated every 2 hours per bulb syringe. Try it. The formula for Eusol is

Calx Chlorinata	2 oz.
Acidi Borici	2 oz.
Aquae ad	1 gal.

Let stand 24 hours and filter.

It is claimed by the British that this evolves hypochlorous acid between c. 45 and 50, but there is no means of knowing and sometimes but very seldom then the Ca. Chlor. is too strong a sample, the patient complains of the skin being irritated. Anyway it is not alkaline and seems to be an efficient antiseptic and usually non-irritating as far as we can tell. Some of the men here apply it hot and I think weaken the antiseptic action by driving off the chlorine. I always use it cold.

Here they do not need M. D.'s so much as aeroplanes. We feel the war is going into the air more and more, and the U. S. can help quicker this way than any other.

France, Dec. 9, 1917.

The nurses have been here for six months and sometimes hand me one. For instance, I asked one man what was the discoloration on his knee. The nurse spoke up, "You're a Jock, aren't you?" I tumbled immediately. Another one asked for porridge at every meal till he learned better..

London, Jan. 4, 1918.

I have been ordered back to London, arriving here a week ago after a cold but uneventful trip from Rouen. . . As we did not have to report to our present station at Shepherd's Bush Military Orthopedic Hospital for 3 days, we saw some theaters and did some much needed shopping and reposing in comfortable beds in warm rooms, quite a change after our lodging in France. Everything quits here during the holidays and even now the work at this hospital is barely picking up. We arrived at the hospital on the 31st just in time for New Year's Eve celebration consisting of a turkey dinner and fancy dress ball of all the doctors and half the nursing staff. The next night we doctors had to go through it all again with the other half. Even I had to dance although I had quit 10 years ago. Don't talk to me about poor, sad England. Everything quits around the holidays, 2 days celebration at Xmas and Boxing Day and 2 days at New Year's. Theaters and shops are doing a big business right along, although we notice some food shortage in London, skimpy butter and sugar rations.

State Society

PAYMENT OF DUES.

Keep the Man at the Front in Good Standing.

The 1918 dues should be readily collected this year, as we believe there is no valid excuse for any delay. We wish to call attention, however, to the very important matter of every County Society making unusual efforts to keep the members at the front in good standing by paying their dues for them. This appears to be the custom in many places throughout the country.—Journal of the South Carolina Medical Association, Jan., 1918.

DUES OF MEMBERS IN SERVICE.

There seems to be considerable misunderstanding concerning the recent ruling of the Council in the matter of dues from members who have entered military service. The resolutions in question were the result of repeated calls on the part of County Societies for suggestions from the Council.

Due deliberation was given the matter in Council meeting. It was fully recognized that these men who joined the colors were doing a heroic duty, and the State and County Societies are under obligation to them. All honor is due them for their sacrifice. The practical question still remains, however: What is to be done about their legal defense, their parent organization?

Malpractice suits will still be filed against our members regardless of their national service. Two years after having rendered medical service they may be sued, and must be protected.. Their defense depends upon the continuance of their membership. Legal defense costs money. The Government will not protect them.

It is as important to keep up legal defense as it is to keep up fire insurance or to pay taxes. The money spent is insignificant compared with the benefit bestowed, and hardly represents a sum greater than most men spend in one evening's entertainment.

One's obligations, moral, financial, and social, do not cease with his entrance into the military service.

The County Society is only given a suggestion for which it asked. It is only a suggestion, not a demand. It can make any arrangement for payment of dues that it sees fit. Several County Societies have donated these dues from its treasury. Other State Societies have dealt with this question in a similar manner; some have asked for full dues; some have exempted their members altogether, but have been reimbursed by the component organization.

The machinery of the State office should be kept running. Medical organization and fraternity are worth the price. Pay your dues in full, and prepare to return home in peace and happiness.

BEWARE OF SWINDLERS.

No doubt you may have seen the several notices, under "General News" in the Journal A. M. A. in several recent issues, entitled "Once more a warning." These refer to swindlers operating in different sections of the country,—various letters having been received from victims in Ohio, Colorado and other widely separated States. Now comes a letter from the well-known publishing house of W. B. Saunders Co. of Philadelphia, saying a man under the name of E. T. Rogers, claiming to represent the University Progressive Club of Cincinnati, for medical and other journals, has been victimizing physicians in Illinois; and the same subscription swindlers, or another under the name of Robert Wayne, has been relieving physicians of their well-earned cash in the region of Gary, Ind. It is believed there is concerted action, perhaps by an organized band, being taken at this time of

the year, to victimize physicians on so-called "subscription" schemes. Every physician should decline to pay any money by check, or otherwise, to subscription agents not personally known to him, or for whom other physicians cannot vouch. Many of these so-called agents operate under the guise of students "working their way through college."

TEACHING THE BLIND.

Miss Kate M. Foley, State Library Home Teacher for the Blind, is now teaching the adult blind in San Francisco and the Bay Region.

In the three years that Miss Foley has been connected with the State Library as home teacher, she has worked in Los Angeles city and county and has taught over two hundred adult blind to read embossed types. Some have learned to read more than one of the types.

Miss Foley also advises parents in reference to children with weak eyes, teaches the blind by correspondence and is always glad to accept invitations from clubs or other organizations to speak about her work or on any other subject of interest to the blind. Even those who are not blind but who cannot read ordinary print without straining their eyes are helped to learn to read embossed types in order to rest their eyes and save them from getting worse. Miss Foley goes to the homes of those who cannot come to her for lessons. The service is entirely free, as Miss Foley is employed by the State Library, the books in all types are furnished free on request from the State Library and the transportation through the mails to and from the borrower is free.

DEL MONTE NOTICE.

Tickets will be on sale for the going trip April 14th to 18th incl., 1918.

Certificates will be honored for return, April 16th to 20th incl., 1918.

Tickets may be sold to either Asilomar, Del Monte, Monterey or Pacific Grove, and certificates will be honored at either Del Monte, Monterey or Pacific Grove, Cal.

The name of the Joint Agent who will sign and verify the certificates is Mr. B. F. Wright, Agent Southern Pacific Company, Del Monte, Cal.

Railroads who will honor tickets (get receipt certificates): A. T. & S. F. Ry.—Coast Lines; Northwestern Pacific Railroad Co., The Salt Lake Route, Southern Pacific Co., The Western Pacific Railroad Co.

Through tickets must be purchased at initial point in order to secure the benefit of the one-half fare returning.

Tickets must be purchased both going and returning on the authorized dates only.

Obtain from the Ticket Agent a receipt certificate when purchasing a ticket for the going trip, and secure a separate receipt for each ticket.

Where meeting is held at Del Monte, Monterey, Pacific Grove, or Asilomar, tickets may be purchased to either of these points and receipts will be honored at either place.

Receipt Certificates will be honored for "return" for continuous trip tickets ONLY, and only to the original starting point.

Where tickets cover passage locally, the return trip must be over the same route as going trip, or via any other route between starting point and destination authorized by tariff of issuing line.

Where tickets cover passage over two or more lines. the return route must be via the same lines and junction points as the going trip.

Each certificate must be properly filled out, signed by the Secretary of the meeting and stamped and verified by the Joint Agent.

Each certificate must: (1) Show that ticket for going trip was purchased for passage on an authorized sale date and at a station from which special fare is authorized. (2) Be presented to Ticket Agent at place of meeting (or other authorized point) for purchase of return trip ticket on an authorized date of sale.

All certificates must be presented to the Secretary of the meeting for his (or his assistant's) signature. The Secretary will then present all certificates, but not less than fifty (50), to the Joint Agent for verification, signature and official stamp. The Joint Agent will then return the certificates to the Secretary of the meeting for distribution to original holders. The minimum attendance required at each meeting, for which excursion fares on the receipt-certificate-plan will be accorded is a total of fifty (50) delegates or attendants holding receipt certificates—except that for conventions in the States of Oregon and Washington, a minimum of one hundred (100) delegates is required.

All Agents are supplied with receipt certificate form blanks.

All certificates must be presented to the State Secretary for his signature at registration desk.

County Societies

ALAMEDA COUNTY.

The meeting of the Alameda County Medical Association, held January 7, 1918, was devoted to the subject of Mental Hygiene. In his address, "Mental Hygiene and its Relation to the Practice of Medicine," Dr. A. W. Stearns, Assistant Surgeon U. S. N., said in part:

At first glance Society appears to be an homogeneous mass, but closer study reveals various strata. Different factors place certain individuals high up in the scale and others near the bottom. Those at the bottom, the dependent classes, again appear to be in groups. Formerly, we were content to call these bad, poor and sick.

Now the group called sick have been subdivided and by means of accurate diagrams great improvement has been made in their condition. We are just beginning to apply the same method to the poor and bad groups with equally successful results. One of the most common findings in both of these groups is mental disease. This falls into three great subdivisions: the insane, the feeble-minded and the psychoneurotic. The psychoneurotics are perhaps the most neglected by the public. Mental hygiene deals with the prevention of these diseases. The three most important known causes are alcohol, syphilis and heredity, consequently a practical mental hygiene program should provide for attempts to diminish the amount of alcohol drunk, to decrease the prevalence of syphilis and to inhibit the reproduction of the unfit.

The paper was discussed by Mr. V. E. Dickson, Director of Reference and Research of the Oakland School Department; Dr. H. G. Thomas of Oakland and Dr. Lillian J. Martin of San Francisco.

Mr. August Vollmer, Chief of Police of Berkeley, was to have spoken on "Crime Problems in their Relation to Medicine," but was unavoidably absent.

The Department of Research and Psychology of the Oakland Board of Education is undertaking a study of some of the problems involved in educational and vocational guidance.

With this end in view it has selected the following three problems far careful and continued study:

1. What is the nature of the child?
2. What training can such a nature encompass with reasonable effort?
3. What is the nature and the training necessary to success in the various vocations? What abilities point toward success and what disabilities point toward failure?

The study will require the fullest cooperation of

the home, teacher, physician, psychologist, employer and research worker.

The meeting of the Alameda County Medical Association, held January 27, 1918, was devoted to the discussion of the Proposed Health Insurance Act, the program being arranged by Dr. G. G. Reinle. Dr. Langley Porter of San Francisco read a paper on "A Tentative Plan for the Working of the Proposed Compulsory Health Insurance Act," and Dr. W. E. Musgrave of San Francisco on "The Results of Compulsory Health Insurance to the Physician and Patient." The discussion of these papers was participated in by Doctors René Bine and J. H. Graves of San Francisco and Doctors T. C. McCleave, H. S. Delamere, L. P. Adams and Dudley Smith of Oakland.

Dr. N. H. Chamberlain, one of the best known physicians in Oakland, died Monday, January 21, 1918, at the Hahnemann Hospital in Chicago, following a stroke of apoplexy.

Professor F. P. Gay of the University of California was commissioned a major in the U. S. A. and is now stationed at Fort Sam Houston.

Dr. Mabel A. Geddes was recently appointed a member of the house staff of Fabiola Hospital at Oakland, California.

Captain A. M. Meads, of the University of California Infirmary, has been assigned to the Massachusetts General Hospital at Boston for service in the urological department.

CONTRA COSTA COUNTY.

The Contra Costa County Medical Society met in regular monthly session, Saturday night, January 26th, at Grande Vista Sanitarium. The Grande Vista is operated by Dr. H. N. Belgum, and is located in one of the most beautiful spots in California. The minutes of the previous meeting were read and approved. The following business was transacted: Dr. O'Malley made a motion that dues for the year 1918 should be nine dollars instead of eight dollars as heretofore. The motion was seconded by Dr. Keser and carried. A motion was made by Dr. O'Malley, and seconded by Dr. Brenemen, that the dues of our members who are in the army be seven dollars. This was also carried.

Dr. R. L. Rigdon of San Francisco gave an interesting and instructive talk on "Diagnosis of Surgical Diseases of the Kidney." His remarks were based upon his large clinical practice. It was well received and discussed with enthusiasm by the members. The meeting was followed by an elaborate luncheon given by Dr. Belgum. Adjournment was not until very late because of the comforts of a large grate fire and cigars.

Those present at the meeting were: Dr. Rigdon of San Francisco; Dr. Fitzgibbon of Cowell; Dr. Morill of Crockett; Dr. Brenemen of El Cerrito; Dr. O'Malley of Crockett. Those present from Richmond were: Dr. Carpenter, Dr. Blake, Dr. Keser, Dr. Smallwood, Dr. Cunningham, Dr. Abbott, Dr. Carpenter.

The regular meeting night for the Contra Costa Medical Society for the year will be the last Saturday night of each month.

FRESNO COUNTY.

County Society Meeting.

The regular meeting of the Fresno County Medical Society was held in the University Club quarters last Tuesday evening. The entire evening was given up to the discussion of "Problems of Social Insurance," "School Sanitation and Public Health," and the "Christian Scientist's Antagonism to Public Health Measures."

A committee recently appointed to revise and re-write the constitution and by-laws gave the first reading of the revised work; much valuable discussion occurred, such as there being no provision for the proper conduction of the hearing of complaints against member doctors. The committee was instructed to offer some plan for adoption at the next meeting.

Dr. Wallace P. Martin was appointed a committee of one to accumulate material for a medical library, arrangements having been made with the Fresno County Library Association for the addition of a medical branch to that institution. Many rare collections have already been donated by members. The society will endeavor to keep on file there all important current medical literature for the benefit of the profession and of science generally.

The secretary reported the receipt of $614 since the January meeting; also that he had remitted to the state secretary the sum of $420, and read the names of those for whom he had remitted. Every effort is being made to keep members paid up and in good standing with the state society.

Dr. R. M. Jones has returned from Ft. Riley, Kan., where he has been in the M. O. T. C.

Preparations are under way for the handling of the medical examination of "Drafts" to begin February 13 next.

Dr. Guy Manson has returned from several days at Bay City.

Dr. W. L. Adams, who has recently received a First Lieutenant's commission, is now on duty at the Letterman General Hospital, Presidio, San Francisco.

Dr. T. N. Sample is again on duty after a serious illness.

The next meeting of the Fresno County Medical Society will be held the evening of March 5, when Chief Vollmer of Berkeley's Police Department will speak on "The Causes of Crime."

HUMBOLDT COUNTY.

The following new officers were elected for Humboldt County Medical Society for 1918: President, Louis P. Dorais; vice-president, Joseph H. Walsh; treasurer, John A. Lane; secretary, Lawrence A. Wing; delegate to State Society, Louis P. Dorais; associate editor, Louis P. Dorais.

Death of Dr. Rae Felt during 1917 in San Francisco. Gall stone operation.

KERN COUNTY.

When it became known that Major Homer Rogers and Capt. C. W. Kellogg, both in service at Camp Kearny, were at home on a forty-eight hour furlough, the members of the medical profession in the city got together and, including among the guests of honor the other members of the profession who have received commissions, tendered them a banquet.

The guests of honor were, Maior Homer Rogers, Capt. C. W. Kellogg, Lt. G. M. Bumgarner, Lt. Joe Smith and Major W. H. Cook.

Major Rogers and Capt. Kellogg are in service at Camp Kearny, Maj. Cook is a S. A. War veteran and has recently been appointed First Asst. Surgeon at Soldiers' Home, Sawtelle. Lts. Bumgarner and Smith are awaiting orders.

The banquet was held at Hotel Tegler, and the menu, under the personal supervision of Mr. Tegler, was certainly appreciated by all present. A notable feature was the entire absence of any alcoholic beverage.

Dr. S. F. Smith, whose son Joe is awaiting orders, was chosen toastmaster and presided in his usual affable manner.

Very instructive and enjoyable talks were made by Major Rogers and Capt. Kellogg describing medical life in camp, Major Cook, of Spanish War fame and Dr. Fred Crease, who has seen service in Canada during the Riel rebellion.

Those present, in addition to the guests of honor, were Drs. N. N. Brown, Buchner, Fred Crease, Geo. Crease, Cuneo, Fraser, Goodall, Gun-

dry, Hamlin, Hull, McNamara, Mitchell, Sabichi, Scott and S. F. Smith.

Dr. Morris dropped in for a few minutes and others who were unable to be present sent their regrets.

The very pleasant affair was closed by standing and drinking a toast, in Adam's ale, to our Lt. M. Y. Marshall, in service in an Eastern camp. Lt. Marshall was the first of the medical fraternity to join the colors from Bakersfield.

LOS ANGELES COUNTY.

County Medical Association Meeting.

The Los Angeles County Medical Association meeting took place January 17, the president, Dr. William Duffield, presiding.

Income Tax.—Mr. John P. Carter, Collector of Internal Revenue, spoke on this most intricate subject. He said that some points are still doubtful and had to be adjudicated, that the construction of the law is strict and ignorance of it is no excuse. The law requires that a statement of income must be made by all unmarried individuals where the amount is $1000 or more. The minimum income received by married individuals exempt from tax is $2000. Reports must be filed by March 1, and the tax paid by June 15. The subject, with discussion, covers some 2000 pages.

Social Health Insurance.—Dr. John R. Haynes spoke briefly on Workmen's Compensation Act, and approved of the same, saying that because of its success Governor Johnson appointed a committee and favored an amendment to the constitution in order that State Social Health Insurance may also become a law.

Mrs. Frances C. Noel, a Commissioner of State Social Health Insurance, said the Governor was urged to appoint the commission by civic workers who had made a study of it, and that it dates back to group insurance of the third century. She paid a high compliment to the secretary of the commission, Mrs. Barbara Nachtrieb-Grimes by graciously deferring the subject to her. Mrs. Nachtrieb-Grimes, a charming lady with a pleasing delivery, won the hearts of the medical fraternity present and captured their scientific minds by her convincing and lucid presentation. All the supposed opposition to Health Insurance seemed to vanish and the idea of holding hands with Christian Scientists to defeat the measure caused a good-natured ripple of laughter. Some questions were asked, rather for information than discussion.

Dr. C. P. Thomas said he feared the plan because of his experience with the operation of accident insurance. Mrs. Grimes agreed fully, but pointed out that Health Insurance will not be run for the benefit of insurance companies. Dr. Charles C. Browning moved that twelve members be appointed by the president for the study of the subject. Dr. Geo. H. Kress reminded Dr. Browning that he himself had appointed a committee while in office. Dr. Wenzlick, as chairman of that committee, mentioned that the committee had reported a year ago, but little interest was shown in the matter at that time, and that the report will appear in the February issue of the California State Journal of Medicine.

Mrs. Frances N. Noel, member of the California State Social Health Insurance Commission, stated that the impression has been created that Social Health Insurance is a purely Germanic idea. This is erroneous, for Social Insurance is in reality nothing but workmen's insurance, and as such dates back as far as the twelfth century. It has also been stated that the workers of California are opposed to Health Insurance. This is not so, for the State Federation of Labor endorsed Health Insurance at its last convention, October, 1917.

The California State Social Insurance Commission has endeavored in every possible way to gather the view-point of all concerned, and from the very beginning has invited representatives from organized employers, from organized labor, from the medical profession, from women's organizations, and from fraternal orders. As a Commission, it has consulted with every element whose viewpoint must necessarily come into consideration.

"One of the most difficult problems which confronts any Commission, especially an unpaid commission such as this, is to secure the right person for Executive Secretary. As a Commission, we were anxious to secure a home product, and we turned to our University in the hope that we would find the right person there. We were more than fortunate in finding a young woman who had passed the Bar and had taught economics in the University for one year. I take great pleasure in introducing to you now Mrs. Barbara Nachtrieb-Grimes, who is more able than I to talk to you as men of the medical profession, on the issue of Health Insurance, because she has of late been in constant touch with representative men of the medical profession up North, and she will bring to you a special message from them."

Mrs. Barbara Nachtrieb-Grimes, Executive Secretary of the State Social Health Insurance Commission, said:

"Mr. President and members of the Los Angeles County Medical Association.

"In presenting to you the subject of Social Health Insurance, I feel that you should not be considered merely physicians having a special interest in this very important subject. The social facts which make health insurance legislation really necessary in California should be placed before you as citizens of this state before the aspects of such legislation of special interest to you as a profession are discussed.

"In 1915, it was called forcibly to the attention of the legislature by persons engaged in the work of public charity in California that destitution and economic dependency among wage earners of the state were increasing at an alarming rate. It was pointed out that demands for public assistance were becoming so heavy as to be a great financial burden upon the public funds. The splendid results of our Workmen's Compensation Act in preventing pauperism from industrial accidents was pointed out and it was suggested that other Social Insurance might prove equally useful in cutting down the increasing amount of destitution. It was made very clear that in the opinion of these social workers California would have to do something to prevent its citizens from becoming dependent upon public charity if we were not to face the problem of an intolerable financial burden in taking care of them after they become unable to take care of themselves.

"As a result, the legislature created an unsalaried investigating commission to look into the matter, the Social Insurance Commission. The commission was directed thoroughly to investigate the social and industrial conditions in the state, in their relation to dependency problems, returning to the legislature the tabulated facts and to report to the legislature whether it was advisable and practicable for the state to take another step in the field of Social Insurance.

"The commission determined at once to concentrate upon one phase of the complex subject put before them so as to return to the legislature a report of real value rather than a superficial smattering of the whole question. The problem of sickness among wage workers was selected, with the branch of Social Insurance designed to cope with the problem, Social Health Insurance.

"The commission made a most intensive survey of the working and living conditions of the wage earners of California in their relation to the question before them.

"It will not be possible for me to discuss all

the surveys conducted, I shall, however, call attention to those of major importance.

"The general earning capacity of workers in California and the cost of living was first looked into, to see what margin was left for meeting the expenses and losses of illness. Since over half were securing less than $75 per month, and many between $50 and $60, with the cost of food and shelter (before the war) amounting to at least $50 for the average family of five, it was plain that with the other necessary expenses of light, heat and clothing, the earnings of the majority of wage earners were consumed in meeting the ordinary living expenses. In view of the comparatively high cost of medical and hospital care,—which I need not explain to members of your profession,—the expense coming at a time when the earning power of the sick wage earner was cut off, it was clear that a serious illness was bound to bring difficulty even to the more prosperous of the wage workers.

"From generalities the committee went to specific cases. Five thousand of the families asking for public charity in Los Angeles and San Francisco counties were investigated for the purpose of finding out the immediate cause of their destitute state. In over half the cases, 52 per cent. to be exact, sickness was the immediate cause. Sometimes it was illness of the wage earner, in other cases his dependents, and in some instances illness of the entire family.

"In 11 per cent. of the cases, tuberculosis was the specific disease. Tuberculosis is of course the most hopeless disease for the wage earner to face and the most impossible to deal with through charitable agencies because the treatment necessarily involves great expense. The tuberculosis visiting nurses can and do teach the tuberculous patients how not to infect other people, but their advice to these patients that they should have several quarts of milk and a half dozen eggs each day and if possible spend six months or a year in the country, in the face of their financial condition, is worse than useless. Seventy-five per cent. of the persons dying each year in this state from tuberculosis earn less than $1000 per year. These persons never had a chance for life and health.

"Whenever the statement is made that tuberculosis, if caught in its incipient stage is a curable disease, the qualification should be made 'for those who can afford the necessary treatment.' The social histories of 5000 of these patients, receiving care at the free clinics, were investigated. These clinics have had steadily increasing demands made for treatment and have not been able to enlarge their equipment fast enough to keep up with the growing number of applicants. It was found that 90 per cent. of the persons receiving medical charity from the free clinics were otherwise independent, self-supporting persons—having family income of from $60 to $100 per month. Only 10 per cent. were charity wards in the general sense of the word.

"The people asking for this medical charity are able to meet the ordinary expenses of life but cannot pay the rates demanded in private practice, for the care needed during illness. Thus, by virtue of the present lack of organization of medical aid for this large group of wage earners, the medical profession is rendering a vast amount of service to self-supporting persons, for no remuneration.

"The experience of 1000 women wage earners with illness was investigated. A record of the personal experience of women working in department stores, laundries and eating houses for the year 1915 was made. It was found that the great bulk of the indebtedness of the entire group for illness was incurred by less than 50 women. Some had bills amounting to 60, 70 and in a few instances, 90 per cent. of their annual income, because of one serious illness.

"The expense of 1000 male wage earners for the same year was a repetition of the same story. The cost and loss of a serious illness meant an intolerable burden to the unfortunate individual. Investigation of what the wage earners were doing to protect themselves against the losses of illness, disclosed the fact that a great many (mostly the better paid workers) were insuring themselves for cash benefits in fraternal orders and other mutual benefit societies. There was a great need felt in these societies for medical care as well, and the attempt was being made to provide it by contracting with a general physician at a very low rate of remuneration. In only one instance was a lodge found arranging for specialist care and that organization was finding the cost prohibitive. No lodge provided hospital care for its members. Many employers were feeling the need of providing care for their employees and were arranging with doctors on salary to do this work.

"In other words, a marked tendency was found toward contract medicine, allowing, of course, no choice of doctor, and in the efforts of the wage earners' societies, the arrangement provided only for a general practitioner with none of the specialties essential for modern scientific medicine.

"A survey of hospital space and equipment showed that we have not in the state two-thirds of the number of beds we should have to conform to standards, and most of the beds we have (about three-fourths of the total) are in commercial hospitals available only at a price beyond the means of the great majority of the people in this state,—the wage earners and their families.

"Surveys were made of two industrial centers, South San Francisco, a town of unusually high wage level, and the Potrero and South Mission district of San Francisco, where the poorer paid workers reside. It was found that the sickness rate in the prosperous town of South San Francisco was less than average while over 40 per cent. of the wage earners were insured in fraternals and unions. The sickness in the San Francisco district was unusually high while less than 1 per cent. of the inhabitants were protected through voluntary insurance. In other words, the people of the lowest earning capacity, with the greatest tendency to sickness and in the greatest danger of becoming dependent should sickness arrive, had not taken any precaution to protect themselves.

"The cities and counties of the state, it was found on investigation, spent over $2,000,000 in 1915 for the medical and general financial assistance of persons rendered destitute by illness. This was just 100 per cent. more than they spent in 1912. In other words, the demands upon public charity made by sickness had doubled in three years, involving an additional $7,000,000 expenditure.

"The commission was convinced by these facts that the problem of sickness among the wage earners of California was serious; that it was increasing at such a rate as to threaten financial hardship to the public funds. It was convinced that it was impossible for the majority of wage earners to afford to purchase scientific medical care with the result that a vast amount of preventable illness ensued. It had been shown that an increasing number of wage earners were receiving medical charity and that the largest single cause of public relief was illness in the wage-earning families. The commission felt it essential that the state take steps to prevent its wage earners from becoming destitute from this cause, rather than pursue the present unconstructive policy of taking care of them financially and medically after they are in distress.

"It advised the legislature that Social Health Insurance, providing that wage earners and their employers should pay when well and at work,

toward the insurance fund which would provide them with scientific medical care and hospital care and a substantial part of their wages when out of work because of illness, would effect this preventive policy. Social Health Insurance would distribute the burden of illness in such a way that it would be a burden no longer. It would make possible the practice of preventive medicine among the wage earners and give an opportunity to keep them well in place of the present wasteful system of caring for them after serious illness has set in. It would make it possible for wage-earning families to stand attacks of illness without having to ask help from public charities. It would give the tuberculous wage earner access to the sanitarium care he needs and the diet required for combating his disease, and would at the same time provide part of his wages for the care of his family. In other words, it would help to make tuberculosis a curable disease for the poor man as it is now for the well-to-do. It would enable a large number of persons, who now receive medical charity, to pay for the treatment they receive without being pauperized, and, without being burdened with debts, they would have access to the scientific medical and hospital care which in the interests of public health would be available for all persons.

"The commission reported that profit-making companies should not be permitted to participate in Social Health Insurance, since the cost by their presence would be tremendously increased and the proper organization of medical aid be prevented. Free choice of physicians by the wage earner and provision for diagnostic centers available for those practicing under the act, together with organization for specialist care, will be the basis of medical organization under the proposed California plan.

"The medical profession, which is really interested in bettering the public health of the community, should lend every assistance to the commission in the planning of this legislation which will mean the greatest step forward in public health."

—

Eye and Ear Section.—Dec. 3, 1917.

Dr. Detling reported a case of death due to labyrinthitis with history of meningitis. Dr. Lefler operated on a woman for nasal obstruction. She had chronic discharge from the ears, defect of speech, and mitral insufficiency, and died suddenly, according to the death certificate, of ptomaine poisoning. Dr. George W. McCoy reported a case of frontal sinus infection relieved by removing pus. Nine months later patient returned with the same trouble, kidney complication, an edema around the eyes. After operation Dakin's solution was used, but infection spread over forehead and cheek. Three months later a left hemiplegia developed, the patient dying of brain abscess. In opening the ethmoids and antrum of a diabetic case it was found that they had been operated on before and that a probe probably passed into the brain tissue. The patient did well for eleven days when she died in diabetic coma. Dr. Rogers of Long Beach reported a boy dying suddenly from collapse three days after the third dose of antitoxin administered for diphtheria. His twin brother recovered from the same affection.

Dr. Charles G. Stivers has received his commission as First Licutenant in the Medical Reserve Corps and has been on duty since October with the Examining Board of the Aviation Section of the Signal Corps in Los Angeles.

—

Pasadena Branch.

At the December meeting Dr. F. A. Speik was elected chairman, Dr. George E. Campbell, vice-chairman, and Dr. Harry F. Markolf, secretary-treasurer. At the January meeting Dr. S. J. Mattison talked on Acute Acidosis in Pregnancy, reporting a case. Dr. Lorena Breed discussed the laboratory methods and findings. A general discussion ensued. Dr. Henry Sherry talked on the need of medical assistance to families of soldiers.

—

Santa Monica Bay Branch.

At a meeting of the Santa Monica Bay Branch, held at the Elks clubhouse, Santa Monica, on January 23rd, the following officers were elected for the year 1918: President, Dr. E. E. Roberts, Sawtelle; vice-president, not elected; secretary-treasurer, Dr. E. N. Reed, Santa Monica; councillor, Dr. I. N. Magee, Venice. Nine members were present, meeting at 6:30 p. m., and having dinner together, followed by a business and social meeting. This was a meeting in the interest of fraternity and good fellowship and as such it was a great success.

—

Pomona Branch.

Pomona Branch of the Los Angeles County Medical Association reports that the meeting was called to order by Chairman Dr. Ralph Smith. Dr. E. E. Kelley was elected councillor to represent the Pomona Branch in the County Society, to fill the vacancy caused by the death of Dr. F. W. Thomas. Dr. C. C. Toland of Los Angeles presented a lantern to the society for use in presenting papers. A vote of thanks was tendered the doctor for the excellent gift. Papers were given by the following: Dr. A. D. Cooke, "The Problem of Pus in the Peritoneal Cavity." This was ably discussed by Drs. J. K. Swindt, Collins, C. G. Toland and E. E. Kelly. Able papers were given by Dr. N. J. Price on "The New Public Health," and Dr. Robert L. Smith, subject, "Intestinal Parasites." These papers were discussed by Drs. Hubble, Slaughter, A. B. Cook and Shirk.

Dr. Frank W. Thomas, prominent pioneer physician of Pomona, died at his home in Claremont January 13, 1918. He was a councillor of the Los Angeles County Medical Association, representing the Pomona Branch. He is survived by a widow and daughter.

—

Los Feliz Hospital.

Los Feliz Hospital of Los Angeles, a corrective detention place for women under city supervision, is thoroughly equipped and was opened for public inspection on January 21. It is a war measure. The purpose is to reduce as far as possible the spread of infectious diseases and at the same time provide a helpful detention place for women who may fall under police supervision.

The hospital is up-to-date in every respect. It has fifty-one beds and will be conducted under the authority of the Los Angeles City Health Department and Health Commissioner Luther M. Powers.

The social service committee of the Board of Health will submit a report to the court following the hospital discharge of each patient, with such recommendation for leniency as the committee may deem proper, and will see to it that suitable employment is found for them when they leave the institution. Visiting at the hospital will be discouraged to avoid anything that tends to put the patients on exhibition. Dr. Harriet Probasco will be the medical head of the hospital with a corps of four or five nurses. There will be vocational training.

Guilty of Practicing Medicine Without License.

B. A. Lewis was sentenced to serve 300 days in the county jail or pay a fine of $300 by Superior Judge Paul J. McCormick on January 23. The State Board of Medical Examiners alleged that Lewis used cappers to engage Long Beach citizens in conversation in parks or on streets and induce persons afflicted to call at the Lewis medical establishment. A jury found him guilty.

W. B. Thompson of the "Little Church," Fifth avenue near Pico street, Los Angeles, entered a plea February 2 of guilty, in Police Judge Ray Chesebro's court and was also forbidden to apply for a license for two years. Fifteen women patients, several nurses, and others testified against him. Thompson practiced the "zonetherapy," consisting of tieing strings, of various colors, to the patient's fingers, fastening clothes pins on the nose, ears and toes, and the "laying on of hands." H. J. Castellan, special agent for the State Board of Medical Examiners, told of the nature of the evidence.

—

Texas Bats Conscripted to Kill Mosquitoes.

Long Beach will import Texas bats noted for feeding on mosquitoes. County Health Officer Pomeroy has asked Major Lisenby to procure these night raiders of the swamps at once for the city reservoir on Signal Hill. Dr. Harold, county sanitary inspector, informed the city commissioners of Long Beach February 2 that an appeal to the State Board of Health would be made unless steps were taken to stop the hatching of mosquitoes in municipal reservoirs. The Long Beach Council of Defense has asked the same measure for the harbor district where mosquitoes interfere with shipbuilding.

—

State Medical Advisory Board.

The State Medical Advisory Board for District 3, established headquarters January 14 at the Los Angeles County Hospital with Dr. Granville MacGowan as chairman. This board will hear appeals from findings of physicians working with the local boards, and by exercising a careful supervision, will reduce the number of men sent to camps who are physically unfit. The board is a new part of the selective machine, and holds practically the same position in regard to appeals on physical grounds as the district appeal board does to appeals on grounds of dependency, agricultural and industrial occupations.

—

California Medical License Act Upheld.

The Act was attacked by L. E. Nickell and Robert J. Burke, self-styled "faith healers," in a case filed in Los Angeles in the United States district court, March 20, 1917. Three judges on January 21, denied a restraining order against the State Board of Medical Examiners and other officials, and as the case involved the constitutionality of the Act, it was appealed directly to the supreme court.

The contention was that the Act discriminated unduly between healing by "prayer," which was excepted from the operation of the Act, and healing by faith, the method of the "faith healers."

—

Germans "Impersonal Enemy."

Dr. R. R. Burt of South Pasadena, now captain, writes from Camp Lewis that soldiers in the trenches have less hatred for Germans than the civilian population. "I begin to understand the viewpoint. Just as a patient that one operates on becomes a 'piece of work' on the table, and one tackles the job in an impersonal way without feelings of pity or nervousness, so in the war the game with the enemy seems to become more and more impersonal."

California's Death Rate Lowest.

Dr. Truby King of the Royal New Zealand Society for the Health of Women and Children, told an assembly of women under the auspices of the State Board of Charities and Correction at the Hotel Alexandria, on February 1, that the infant mortality in New Zealand during the last ten years has been reduced from 20 to 5 per cent. The lowest percentage of infant mortality is in England and the United States, with California the lowest of all.

—

To the French Front.

Forty Los Angeles Nurses' aides have been called for immediate service by the government. Four hundred are enrolled and more are sought for the Red Cross. The women must have had hospital training; those speaking French are preferred.

—

Personal.

Dr. James H. McBride of Pasadena left January 19 to take up war work in Washington under the Council of National Defense, as advisor on housing conditions. Mrs. McBride and their daughter, Miss Emily McBride, accompany him.

Major Chas. D. Lockwood, who organized the Pasadena Ambulance Corps No. 1, and twenty-nine other members of the organization, including five Pasadena boys, have arrived safely in France.

Dr. Alvin Shattuck died at the Los Angeles County Hospital January 28, to which place he was removed immediately after his arrest by detectives of the police narcotic squad for alleged drug running.

Dr. Frank A. Woodward, who has been connected with the Los Angeles Health Department for the past three years, left January 24 for active service in the military base hospital at Camp Bowie, Texas.

Capt. Clarence Moore of the Medical Corps, United States Army, was the guest of honor at a luncheon at the California Club, tendered by Dr. Walter Lindley. A number of prominent professional friends were present. Captain Moore left for his post at Fort McPherson, Ga., January 26. He has been here because of the illness of his father, Dr. M. L. Moore, who is now considered out of danger.

Dr. Ross Moore of Los Angeles has been seriously ill at Camp Bowie, Texas, where he is a major in the Medical Reserve Corps, temporarily attached to the base hospital.

Dr. John P. Gilmer, head of the receiving hospital, was appointed, February 4, as recruiting surgeon for the U. S. Navy. He took the examination several weeks ago at Mare Island.

MONTEREY COUNTY.

A special meeting of the County Society was held January 12, and the following were elected as officers for the ensuing year: President, H. C. Murphy (re-elected), Salinas; vice-president, Martin McAulay, Monterey; secretary, T. C. Edwards (re-elected), Salinas; treasurer, John Parker (re-elected), Salinas.

Dr. W. R. Reeves has been called to the front and is now stationed at Linda Vista, and has the rank of Lieutenant.

Dr. F. S. Baxter has been transferred to Mendocino County Society, as he has removed to Willitts, in that county.

SACRAMENTO COUNTY.

The regular monthly meeting of the Sacramento Society for Medical Improvement was held Tuesday evening, January 15, at the Hotel Sacramento. President Dr. G. A. Briggs presided. Number of members present, 27; visiting physicians, 4.

A very interesting and instructive paper on

"Acidosis in Diabetes" was read by Dr. Lovell Langstroth of San Francisco. The paper was discussed by Dr. Twitchell, Dr. Bramhall, Dr. Simmons, Dr. Howard and Dr. Gundrum. Closed by Dr. Langstroth.

Cases were reported by Dr. Twitchell, Dr. Gundrum, Dr. J. A. McKee and Dr. James.

The Milk Commission delivered its monthly report.

SAN BERNARDINO COUNTY.

The regular monthly meeting of the San Bernardino County Medical Society was held in Redlands January 8, 1918, at the University Club.

Dr. C. W. Anderson of Los Angeles, who has recently returned from Europe, gave a talk on "Work in a Base Hospital in France." Dr. Schreck of Redlands reported for the committee on care of the practices of the men called to war. Dr. Blythe of Redlands moved that the committee, with a report of the whole committee, report at the next meeting.

There were many members of the Riverside County Society present.

Dr. Anderson's subject was well discussed and many questions asked and answered.

A buffet luncheon was served.

Dr. T. J. Evans, Paradise Valley Sanatorium, National City, Cal., moved to Colorado Springs, Colo. Will join society there.

Dr. G. G. Moseley moved to San Francisco.

Dr. W. B. Power moved to New York.

The names of Dr. Charles A. Harrison, College of Medical Evangelists, 1915; Dr. Arthur N. Donaldson, College of Medical Evangelists, 1915, and Dr. W. B. McGill, University of Pennsylvania, 1889, were received on application to become members of the society, and read at the meeting and referred to the Board of Censors in due form.

—

The regular meeting of the San Bernardino County Medical Society was held at the Ramona Hospital, San Bernardino, on February 5, 1918.

Dr. C. G. Hilliard, "Some Unusual Anatomical Structures Found in Hernia Sacs," with report of a case.

Dr. P. M. Savage, "Two Fatal Cases of Botulism."

Dr. H. W. Mills, "Sarcomatous Degeneration of Uterine Fibromata," with report of two cases.

SAN DIEGO COUNTY.

The second meeting of the Medical Society in January carried a scientific program by two members of the Los Angeles Society. Dr. Donald Frick presented a paper on the efficiency classification of nephritis and the dietetic treatment indicated in the various forms and stages. Dr. R. B. Hill gave a clinical paper based on his own personal results in the treatment of syphilis of the nervous system. Both of these papers were ably presented and received free discussion.

A committee is at work drafting a constitution for the approval of the San Diego County Medical Society.

The work of the County Hospital under County Physician Wicherski is now thoroughly organized for the ensuing year. The new staff has begun its duties with that comfort of mind only made possible by the presence of competent internes. The tuberculosis pavilión is well under way. Its completion will release abundant space for the department of obstetrics and the nursery.

During the month San Diego has lost two of her valued members of the profession in the persons of Dr. C. W. Taylor-Goodman, Michigan University, 1880, and Dr. Daniel D. Whedon, Long Island College, 1905.

The San Diego Diagnostic Group Clinic has just completed its first year of service and will shortly issue a synopsis of the work, with a detailed classification of cases and end results, so far as obtainable. Members of the staff are unanimous in defining the work as a very high grade of graduate instruction in diagnosis, and their enthusiasm in the service remains unabated.

SAN FRANCISCO COUNTY.

During the month of January, 1918, the following meetings were held:

Tuesday, January 8—General Meeting.

University of California Hospital Clinical Evening.

1. A case of continued fever (four weeks duration) in a child of six years; presentation of case. Rachel Ash.
2. The treatment of incomplete inguinal hernia by the Kocher operation. W. I. Terry.
3. Case reports.
   Frank W. Lynch:
   - A. X-rays and photographs of skulls of pregnant women whose faces showed thickening of features.
   - B. X-rays of pelvis of pregnant and non-pregnant women, showing little or no difference in the sacroiliac joints.
   - C. Demonstration of specimens: (a) cancer of the uterus; (b) prolapse of the uterus.
   - D. Microscopic slides showing the fate of fibroids during pregnancy and the puerperium.
4. Occurence of a positive intradermal reaction in meningococcus carriers, and its significance. F. P. Gay and A. J. Minaker.
5. Acidosis in diabetes. Lovell Langstroth.

Tuesday, January 15—Section on Surgery.

1. Measures taken by the City Board of Health for the prevention and treatment of venereal diseases. John A. Sperry.
2. The control of vice diseases among troops through civil and federal cooperation. Colonel L. M. Maus, U. S. Army.

Tuesday, January 22—Section on Eye, Ear, Nose and Throat.

Aviation, with special reference to examination of candidates.

1. Introductory remarks. Major R. H. Fletcher, Chief Aeronautical Officer, Western Division, U. S. Army.
2. Examination of candidates. Captain Henry Horn.
3. Psychological examination. Professor G. M. Stratton, President of the Examining Board.
4. Eye qualifications. Walter Scott Franklin.
5. Ear qualifications. Lieutenant F. W. Lewitt.

Demonstration of examination of candidates in the Barany chair, and eye tests.

Tuesday, January 29—Section on Urology.

1. Teratoma Testis. Frank Hinman.

Presentation of operated cases by Frank Hinman and L. Eloesser.

SAN JOAQUIN COUNTY.

The regular monthly meeting of the San Joaquin County Medical Society was held at the Chamber of Commerce, Friday evening, January 25. Those present were Drs. R. T. McGurk, C. D. Holliger, Minerva Goodman, J. V. Craviotto, L. Bozier, J. T. Davison, Margaret Smyth, Fred Clark, Mary Taylor, C. F. English, and Dr. Grant Selfridge of San Francisco as guest.

The paper of the evening was given by Dr. Selfridge on "Spasmodic Vasomotor Disturbances of Upper Respiratory Tract with Special Reference to Hay Fever." The doctor's address showed a very thorough investigation of the western coast as to

the pollens causing hay fever. His classification of the causes and consequent treatment showed much careful work, and if carefully followed would give relief to most of these sufferers.

SANTA CRUZ COUNTY.

The Santa Cruz County Medical Society held a meeting on January 19 and elected the following officers: President, Dr. Easterday; 1st vice-president, Dr. W. H. Keck; 2nd vice-president, Dr. H. G. Watters; secretary-treasurer, Dr. A. N. Nittler; delegate, Dr. P. T. Phillips; alternate, Dr. H. E. Piper; censors, Dr. F. H. Koepke (1918), Dr. L. M. Liles (1919), Dr. A. F. Cowden (1920); corresponding editor, Dr. A. N. Nittler.

SANTA BARBARA COUNTY.

The annual meeting of the Santa Barbara County Medical Society was held Monday evening, January 14. An unusually large attendance was present to hear the paper of the evening, delivered by Miss Jameson, Superintendent of the Cottage Hospital, Santa Barbara, her subject being "The Small Community Hospital and the Doctor." The paper was very interesting and highly instructive, and a hearty discussion of same was entered into by all present.

The officers elected for the ensuing year are as follows: President, Dr. Wm. H. Campbell; vice-president, Dr. Benj. Bakewell; vice-president at large, Dr. L. Bert Coblentz, Santa Maria; secretary and treasurer, Dr. R. Manning Clarke; delegate, Dr. R. Manning Clarke; alternate delegate, Dr. Lawrence R. Ryan.

YOLO COUNTY.

The Yolo County Medical Society meets on the first Tuesday of each month at the homes of the members.

The following officers were elected for 1918: H. D. Lawhead, president; M. B. Bransford, vice-president; Frances Louise Newton, secretary and treasurer. The secretary was appointed county editor for the Journal.

There was no meeting held in January. The society met on February 5th at the residence of Dr. C. E. Beebe. Subject: "Confinement Complicated by Malaria."

Dr. W. E. Bates was delegate to the State Medical Society which meets at Del Monte in April. Dr. M. W. Ward, alternate.

Military News

OMISSIONS AND CORRECTIONS IN RE PHYSICIANS IN SERVICE.

Lieut. H. R. Evans, Trona, Cal.

1st Lieut. F. C. Smith, 291 Geary St., San Francisco, Cal.

1st Lieut. Robert M. Jones, Culver City, Cal.

1st Lieut. W. L. Grant, Pomona, Cal.

Capt. Lawrence H. Hoffman, 135 Stockton St., San Francisco, Cal.

1st Lieut. Samuel M. Sproat, Portola, Cal.

Asst. Surg. F. B. Galbraith, San Francisco, Cal.

Capt. L. A. Anthony, Novato, Cal., was reported 1st Lieut. in January issue.

BASE HOSPITAL NUMBER THIRTY, CLINICAL SOCIETY.

Base Hospital Number 30, Clinical Society, was organized January 4th, 1918, at the Camp of the Unit at Fort Mason, San Francisco. Colonel Elmer A. Dean, M. C., was elected president and Captain E. H. Falconer, M. R. C., Secretary. Visitors are welcome at the meetings, which are held every Friday at 3 p. m., and which have for their object the presentation and discussion of medico-military topics.

The following papers have been presented:

January 4th—Soldiers' Heart or Effort Syndrome. Major Eugene S. Kilgore, M. R. C.

January 11th—Some points in the examination of troops for tuberculosis. Capt. E. H. Falconer, M. R. C.

January 18th—Treatment of Infected Wounds. Capt. H. S. Thomson, M. R. C.

January 25th—Treatment of Infected Wounds by the Chlorine Compounds and their derivatives. Lieut. J. H. Woolsey, M. R. C.

February 1st—Shell Shock and the War Psychoses. Capt. H. W. Wright, M. R. C.

MILITARY ANTI-TUBERCULOSIS PROGRAM.

Plans for a complete program for the prevention of tuberculosis in the army have been perfected by the National Association for the Study and Prevention of Tuberculosis, working in co-operation with the Surgeon-General, the Y. M. C. A., and other agencies. This, it is predicted, will put the impending second draft on a better health basis than the first. The program will include not only a follow-up for every man discharged on account of tuberculosis, but a thorough-going health educational campaign among the soldiers.

The National Association program falls into two main divisions: (a) follow-up work and (b) educational work. The first obstacle to the follow-up program was Section Eleven of the Selective Service Regulations regarding the second draft which forbids giving a record of a man's condition to anyone except certain designated officials. The National Association officers, however, placed before the War Department the importance of this work and were influential in persuading them to open the records of rejected men to state and local Boards of Health throughout the country, through the United States Public Health Service and the Council of National Defense.

Inasmuch as the above section of the regulations does not apply to men dismissed from training camps after they have passed draft boards, the Association arranged with the Surgeon-General and the division surgeons in camps to receive the names of all men thus dismissed. These lists are divided up by states and forwarded to state associations and state boards of health for follow-up work. Where men are referred to localities where there are not at present facilities for this follow-up work, the Association will use its good offices to promote the establishing of such facilities.

In the meantime, the Medical Department of the Army has perfected its machinery for weeding out these tuberculosis cases. Every man passed by the draft board after going into camp is examined by the Regimental Surgeon, re-examined by a tuberculosis board, and then, if suspected of tuberculosis, again examined by a tuberculosis expert. This follows a general policy mapped out and recommended by the National Association.

A large number of men have already been accepted into the service who were known to be tuberculous, many of them formerly inmates of tuberculosis sanatoria. Part of the Association's work has been to get in touch with every tuberculosis sanatorium and dispensary in the country and compile lists of all recent male inmates of draft age, giving the history of their cases and whether or not it was known if they were in the army at present. Hundreds of such names have already been received. This data is forwarded to the training camps, the men are located and the results are reported back to the sources of information.

The Association is also co-operating with the Surgeon-General's office to aid the Government in providing sanatoria for those men who have been discharged from the service on account of tuberculosis after their probationary period has expired. All full-fledged soldiers and sailors returned from France or other stations will be cared for as near

to their own homes as possible in sanatoria accommodations provided by the Government. The Government intends to utilize as far as possible existing institutions.

From the second or educational division of the program it is hoped to derive the greater ultimate good by the establishment of fundamental preventive measures among the well. In co-operation with the Educational Committee of the National War Work Council of the Y. M. C. A., the National Association will furnish a number of stock lectures dealing with tuberculosis together with lantern slides to illustrate them. It will also arrange to put the educational secretaries of each of the camps in touch with public lecturers in and around their respective camps. The Association has requested the War Department to give careful consideration to the desirability of appointing one or more special officers detailed to lecture on tuberculosis and allied health subjects in all of the army camps throughout the country.

The Association has prepared a special circular entitled "Red Blood," giving in brief and attractive form a message to the soldier relative to personal fitness, a health "Don't Card," and a Public Health Manual may also be distributed, the latter being a text book of personal hygiene. The Association will also arrange to distribute through the departmental executives of the Y. M. C. A. a number of special tuberculosis exhibits known popularly as "The Parcel Post Exhibit." In connection with these, moving-picture films and lantern slides will be used.

State Board of Health

JANUARY MEETING.

The State Board of Health met in Sacramento on January 5, 1918. The following members were present: Dr. George E. Ebright, President; Dr. Fred F. Gundrum, Vice-President; Dr. Edward F. Glaser, Dr. Robert A. Peers, and Dr. W. A. Sawyer, Secretary.

For the purpose of cooperating with the United States Food Administration in the investigation of concentrated stock feeds and their adulteration, Mr. F. W. Waite of El Centro was temporarily appointed inspector, without salary, in the Bureau of Foods and Drugs.

A telegram from the Minnesota Social Hygiene Commission was presented. The Commission requested that Dr. H. G. Irvine, Director of the Bureau of Venereal Diseases, be given a leave so that he could organize a Bureau of Venereal Diseases under the Commission and the State Board of Health of Minnesota. The Board granted one month's leave without salary.

A communication from the Director of the United States Bureau of the Census was read. The letter stated that, in response to the request of the Board that California be added to the Registration Area for births, special agents would be sent to California in the latter part of February to investigate the completeness of birth registration.

Two nurses were given certificates of registration through reciprocity, and a committee was appointed to supervise the preparation of questions for the examination for certification as registered nurse to be held in Sacramento, San Francisco and Los Angeles on February 20 and 21, 1918.

In response to a request from the University of California for rulings regarding the proposed five-year course for nurses, and the status of university graduates who entered the training school for nurses, the following resolutions were passed:

"Resolved, That the proposed five-year course of training in nursing by the University of California, including three years in the Academic Departments and two years in the University Hospital, be accepted as meeting in full the requirements of the Nurses Registration Act for an accredited training school.

"Resolved, That a regular collegiate course in the University of California, leading to a degree and two additional years of training in the University of California Hospital be accepted as meeting in full the requirements of the Nurses Registration Act for an accredited training school."

A communication was received from the State Council of Defense, urging the Board to keep a high standard of education for nurses in order that nurses going into the army would be properly trained. The Secretary was instrueted to write to the Council of Defense that every measure would be taken by the Bureau of Registration of Nurses to carry out the suggestion from the State and National Councils of Defense, and that active work in raising the standards of nursing education had been carried on by the Bureau from the time of its establishment.

The Arroyo Sanitarium near Livermore, which is the new Tuberculosis Hospital of Alameda County, was added to the list of hospitals eligible for the tuberculosis subsidy, effective on the date of opening, January 12, 1918.

The Board gave instructions that a protest be made to the authorities in Washington against the practice of giving cash mileage, instead of transportation to their homes, to soldiers discharged from army camps on account of tuberculosis. It was pointed out that the present practice would result in an unjust burden on California institutions as it encourages the men to remain in California instead of returning to be cared for by their home states.

The Board approved the plan of the director of the Bureau of Tuberculosis to show two moving picture films on tuberculosis and to make an extensive tuberculosis exhibit at Camp Kearny.

A request that permission be granted to irrigate cauliflower for the New York market with sewage was denied.

Thirty-eight members of County Plumbers' Examining Boards were appointed.

The findings of W. A. Sawyer, the examiner appointed by the Board to hold a hearing in the matter of the application of the West San Joaquin Valley Water Company for a permit to supply water to the city of Los Banos, were presented and adopted. On the basis of the findings the Board adopted a resolution and order requiring the water company to install modern, gravity, rapid sand filters, and to provide for proper sterilization of the water.

The Board gave its approval to the permission granted by the Spring Valley Water Company to the United States Government to use certain watershed lands for army maneuvering purposes under specified conditions.

Temporary permits to operate swimming pools were granted to six establishments.

Two firms were given licenses to operate cold storage warehouses.

One hundred and sixty cases of alleged violations of the food and drug acts had been set for hearing on this date. In fifty-one cases appearance was made in person or through attorney, and the remaining cases were referred to the Board's Food and Drug Committee for action. Most of the cases were referred to district attorneys for prosecution.

W. A. SAWYER, Secretary.

FEBRUARY MEETING.

The State Board of Health met in Sacramento on February 2, 1918. The following members were present: Dr. George E. Ebright, president; Dr. Fred F. Gundrum, vice-president; Dr. Edward F. Glaser, Dr. Robert A. Peers, Dr. Adelaide Brown, and Dr. Wilfred H. Kellogg, secretary.

Dr. Wilfred H. Kellogg was appointed secretary

of the Board to succeed Dr. W. A. Sawyer, resigned. Dr. Frank L. Kelly, Epidemiologist in the Bureau of Communicable Diseases, was appointed Acting Director of the Bureau of Communicable Diseases. A leave of absence was granted to Prof. Chas. A. Kofoid, Consulting Biologist and Director of the Division of Biology, Bureau of Communicable Diseases, such leave to extend during the period of the war. Prof. Wm. W. Cort was appointed to suceeed Prof. Kofoid.

Upon recommendation of the Director of the Bureau of Communicable Diseases, it was determined that the Fresno Branch Laboratory should be discontinued March 1, 1918.

Upon the recommendation of the Director of the Bureau of Registration of Nurses, eleven training schools for nurses connected with hospitals in California, having been inspected and found to meet the full requirements of the Board, were placed on the accredited list for one year. Six nurses were given certificates of registration through reciprocity.

The Director of the Bureau of Registration of Nurses in a communication to the Board stated that the National Council of Defense urges co-operation in meeting the nursing problems that have arisen because of the war, such co-operation to be based chiefly upon the maintenance of a high standard of nursing education, urging hospitals to increase facilities for training nurses. The Council also asks that discouragement be given to short term hospital courses, since they tend to break down the organized machinery of training for nurses. The Board has instructed that the National Council of Defense be assured that every effort will be made to maintain a high standard of nursing in California.

Temporary permits to operate swimming pools were granted to the owners of seventeen such swimming pools, pending the personal inspection by the Director of the Bureau of Sanitary Engineering.

A permit was granted to the Banning Water Company to supply water to the inhabitants of Banning, with the provisions that the supply be kept safe and sanitary and that no modifications or additions to works or source be undertaken without the approval of the Board.

One hundred and two cases of alleged violations of the Food and Drug Acts were set for hearing. Fifty-three of these cases were referred to district attorneys for prosecution.

WILFRED H. KELLOGG,
Secretary.

State Board of Pharmacy

STATUTES REGULATING SALE OF POISONS

It shall be unlawful for any practitioner of medicine, dentistry or veterinary medicine to furnish or prescribe for the use of any habitual user of the same, or of any one representing himself as such, any cocaine, opium, morphine, codeine, heroin, or chloral hydrate, or any salt, derivative or compound of the foregoing substances or their salts, derivatives or compounds; and it shall also be unlawful for any practitioner of medicine or dentistry to prescribe any of the foregoing substances for any person not under his treatment in the regular practice of his profession, or for any veterinary surgeon to prescribe any of the foregoing substances for the use of any human being; provided, however, that the provisions of this section shall not be construed to prevent any duly licensed physician from furnishing or prescribing in good faith as their physician by them employed as such, for any habitual user of any narcotic drugs who is under his professional care, such substances as he may deem necessary for their treatment, when such prescriptions are not given or substances furnished for the purpose of evading the purposes of this act; provided, that such licensed physician shall report in writing, over his signature, by registered mail, to the office of the California State Board of Pharmacy, within twenty-four hours after the first treatment, each and every habitual user of such narcotic drugs as are enumerated in this section, whom he or she has taken, in good faith, under his or her professional care, for the cure of such habit, such report to contain the date, name and address of such patient, and the name and quantity of the narcotic or narcotics prescribed in such treatment; provided, further, that the provision immediately foregoing shall not apply to any licensed physician treating such habitue in good faith who personally administers such narcotics, enumerated in this section, after writing a prescription therefor; and provided, further, that the above provisions shall not apply to preparations sold or dispensed without a physician's prescription containing not more than two grains of opium, or one-fourth grain of morphine, or one grain of codeine, or one-eighth grain of heroin, or ten grains chloral hydrate or four grains of Indian hemp or loco weed in one fluid ounce or, if a solid preparation, in one ounce, avoirdupois.

Department of Pharmacy and Chemistry

REPORTING OF ACCIDENTS FROM LOCAL ANESTHETICS.

The Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association has undertaken a study of the accidents following the clinical use of local anesthetics, especially those following ordinary therapeutic doses. It is hoped that this study may lead to a better understanding of the cause of such accidents, and consequently to methods of avoiding them, or, at least, of treating them successfully when they occur.

It is becoming apparent that several of the local anesthetics, if not all of those in general use, are prone to cause death or symptoms of severe poisoning in a small percentage of those cases in which the dose used has been hitherto considered quite safe.

The infrequent occurrence of these accidents and their production by relatively small doses point to a peculiar hypersensitiveness on the part of those in whom the accidents occur. The data necessary for a study of these accidents are at present wholly insufficient, especially since the symptoms described in most of the cases are quite different from those commonly observed in animals even after the administration of toxic, but not fatal, doses.

Such accidents are seldom reported in detail in the medical literature, partly because physicians and dentists fear that they may be held to blame should they report them, partly, perhaps, because they have failed to appreciate the importance of the matter from the standpoint of the protection of the public.

It is evident that a broader view should prevail, and that physicians should be informed regarding the conditions under which such accidents occur in order that they may be avoided. It is also evident that the best protection against such unjust accusations, and the best means of preventing such accidents consist in the publication of careful detailed records when they have occurred, with the attending circumstances. These should be reported in the medical or dental journals when possible; but when, for any reason, this seems undesirable, a confidential report may be filed with Dr. R. A. Hatcher, 414 East Twenty-Sixth Street, New York City, who has been appointed by the Committee to collect this information.

If desired, such reports will be considered

strictly confidential so far as the name of the patient and that of the medical attendant are concerned, and such information will be used solely as a means of studying the problem of toxicity of this class of agents, unless permission is given to use the name.

All available facts, both public and private, should be included in these reports, but the following data are especially to be desired in those cases in which more detailed reports cannot be made:

The age, sex, and general history of the patient should be given in as great detail as possible. The state of the nervous system appears to be of especial importance. The dosage employed should be stated as accurately as possible; also the concentration of the solution employed, the site of the injection (whether intramuscular, perineural or strictly subcutaneous), and whether applied to the mouth, nose, or other part of the body. The possibility of an injection having been made into a small vein during intramuscular injection or into the gums should be considered. In such cases the action begins almost at once, that is, within a few seconds.

The previous condition of the heart and respiration should be reported if possible; and, of course, the effects of the drug on the heart and respiration, as well as the duration of the symptoms, should be recorded. If antidotes are employed, their nature and dosage should be stated, together with the character and time of appearance of the effects induced by the antidotes. It is important to state whether antidotes were administered orally, or by subcutaneous, intramuscular or intravenous injection, and the concentration in which such antidotes were used.

While such detailed information, together with any other available data, are desirable, it is not to be understood that the inability to supply such details should prevent the publication of reports of poisoning, however meager the data, so long as accuracy is observed.

The committee urges on all anesthetists, surgeons, physicians and dentists the making of such reports as a public duty; it asks that they read this appeal with especial attention to the character of observations desired.

TORALD SOLLMANN, Chairman,
R. A. HATCHER, Special Referee,
Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association, January 15, 1918.

Rules for Government of Maternity Hospitals

STATE BOARD OF CHARITIES AND CORRECTION.

(In accordance with Chapter 69, Statutes 1913.)

Physical Equipment.

1. All rooms and wards shall be outside rooms and the window space shall not be less than one-fifth of the floor space.

2. The rooms and wards shall be of sufficient size to allow not less than 1,000 cubic feet air space for each adult patient and 500 cubic feet air space for each infant kept therein; also 100 square feet floor space for each bed.

3. The heating of all rooms shall be of sanitary type.

4. The flooring and walls shall be in condition and of a character to permit of easy cleaning. All parts of a maternity hospital shall be kept in a cleanly condition.

5. The plumbing and draining or other arrangements for the disposal of excreta and household waste shall be in accordance with the best sanitary practice, subject to the approval of the State Board of Charities and Corrections, and in accordance with the rules and regulations of the local board of health or city ordinance. The water supply shall be pure.

6. A confinement room properly equipped shall be provided. Dressings and medicines for emergencies, clean bedding, body linen and towels shall be kept on hand in sufficient quantity. Means for sterilizing instruments shall be provided and a properly trapped and vented basin supplied with running water for washing the hands.

7. Provision for the isolation of contagious diseases must be made.

8. Sanitary accommodations for thorough bathing of patients and infants must be made part of the equipment of the institution.

9. Fire protection shall meet the approval of the State Board of Charities and Corrections, and shall be in accordance with the rules and regulations of the local fire commission or city ordinance.

10. There shall be a separate bed for each infant.

Care of Patients.

1. In each labor case, at the time of expected delivery, a legally qualified physician shall be promptly notified and shall be present and in attendance at the time of birth.

2. Prevention of blindness in infants.

Attention is called to chapter 724, statutes 1915, which requires the reporting of reddened or inflamed eyes of an infant, within two weeks after birth, to the local health officer of the county or municipality within which the mother of such infant resides. Further, the eyes of all new-born infants shall be treated immediately after birth with a one per cent. solution of nitrate of silver, two drops in each eye, or with other approved solution equally efficacious, and during the first few days cleansed daily with saturated boric acid solution.

3. After the birth of the child a legally qualified physician shall be in charge of the care of the mother and child, and shall superintend all after treatment.

4. If the child is kept in the hospital and is not breast-fed by the mother, the feeding and selection of food shall be under the direction of a legally qualified physician. If a wet nurse is provided, she shall meet with the approval of the physician. In every case where the mother is a proper subject she shall be urged to nurse her child. Under no circumstances will the use of nursing bottles which can not be readily and thoroughly washed be permitted (such as long-tubed nursing bottles). All nursing bottles and nipples must be boiled at least once a day and individual nipples must be provided for each child.

Disposal of Child.

1. Attention is called to section 224 of the Civil Code in accordance with which a child not retained by the mother must be legally relinquished before it can be adopted. This relinquishment must be expressed in writing, signed and acknowledged before an officer authorized to take acknowledgments or before the secretary of one of the organizations mentioned below. Before adoption can take place, a copy of the relinquishment must be filed with the State Board of Charities and Corrections.

2. Attention is called to chapter 569, statutes 1911, providing for the supervision and control by the State Board of Charities and Corrections of the placing of dependent children into homes, which makes it a misdemeanor for any person, association or society to engage in the work of placing children into homes without a license from the State Board of Charities and Corrections.

The following agencies have been licensed to place dependent children into homes and to arrange for adoption:

Charity Organization Society, 2120 Grove street, Berkeley.

Children's Home Society, 2414 Griffith avenue, Los Angeles.
Catholic Ladies Aid Society, City Hall, Oakland.
Oakland Associated Charities, City Hall, Oakland.
Catholic Humane Bureau, 995 Market street, San Francisco.
Children's Agency of the Associated Charities, 1500 Jackson street, San Francisco.
Eureka Benevolent Society, 436 O'Farrell street, San Francisco.
Native Sons and Daughters Central Committee on Homeless Children, 955 Phelan Building, San Francisco.

3. Each licensee shall use due diligence to prevent the abandonment of children, which is, according to sections 270, 271, and 271a of the Penal Code, a penal offense.

4. A licensee shall not be permitted to advertise that he will procure the adoption of children or to hold out inducements to mothers to part with their offspring.

Records.

1. Every licensee must keep a register wherein he shall enter the name and address of every maternity patient, the date of admission and discharge of every such patient, the name and sex of every child born or boarded on the premises, the date of every such birth, the legitimacy or illegitimacy of every child, the name and residence of the father, the date of removal of the child, the name and address of the person taking away the child, and, if relinquished by the mother, the date of relinquishment, the name and address of the person to whom the child is relinquished, and the reasons therefor; and if adopted, the date of adoption, the name of the person signing the consent to adoption, and the name and address of the person adopting the child. Every admission, discharge, birth, death, relinquishment or adoption must be recorded in the register within forty-eight hours after its occurrence.

2. A semi-annual report, which shall be an exact transcript of this register, shall be made to the State Board of Charities and Corrections, 995 Market street, San Francisco, January 1st and July 1st of each year.

3. Each licensee shall use due diligence to prevent deception by a patient as to her identity and shall not receive any person who refuses to give the required information, unless the case is one of emergency. If a patient does not give the necessary information before the fourth day after her delivery, the licensee shall forthwith notify the State Board of Charities and Corrections.

4. All births and deaths must be reported promptly to the local authorities by the attending physician. (See Political Code, section 3077, and chapter 378, Statutes 1915.)

Inspection.

The proprietor or person in charge of a maternity hospital shall give the inspectors of the State Board of Charities and Corrections all reasonable information and shall afford them every facility for examining the records, inspecting the premises, and seeing the inmates.

Granting and Revoking License.

1. Application for license must be made on blank furnished by the State Board of Charities and Corrections.

2. Every applicant must have the approval of the local board of health or health officer.

3. Every licensee shall frame his license and post it in a conspicuous place in the office or room of his establishment in which his patients are received.

4. The license is the property of the State Board of Charities and Corrections and subject to return on demand.

5. Any neglect or evasion of these rules, or any collusion for their subversion, shall constitute sufficient cause for revocation of the license.

6. Any change of management, location, or name shall be promptly reported to the State Board of Charities and Corrections.

New Members

Egeberg, J. C., San Francisco.
Mathe, C. P. L., San Francisco.
Heppner, Maurice, San Francisco.
Noel, Myrtle S., San Francisco.
Sherman, Julius, San Francisco.
Warren, H. S., Montague, Cal.
Maroon, J. Luther, Santa Ana, Cal.
Smith, R. M., San Bernardino, Cal.
Durand, C. J., Colfax, Cal.
Fuller, G. E., Chula Vista, Cal.
Allen, Orah Knapp, Vallejo, Cal.
Ginsburg, S. S., Visalia, Cal.
Edwards, Frank A., Los Angeles, Cal.
Hutchinson, Wm. W., Los Angeles, Cal.
Bonthius, Frederick A., Los Angeles, Cal.
Rodi, Charles H., Pasadena, Cal.
Jeancon, Etta C., Los Angeles, Cal.
Humfreville, D. L., Los Angeles, Cal.
Rogers, Arthur M., Los Angeles, Cal.
Heaney, Harold Robert, San Francisco.
Welpton, Martha, San Diego, Cal.
Maxwell, Alice Freeland, San Francisco, Cal.
Gilliland, A. B., Cottonwood, Cal.
Bennett, E. L., Fresno, Cal.
Murayama, M., Fresno, Cal.
Robinson, J. H., Selma, Cal.
Scarborough, A. O., Fresno.
Walker, G. W., Fresno.
Soboslay, J., San Francisco.
Haven, Maude Noble, San Francisco, Cal.
Layman, Mary H., San Francisco, Cal.
Rose, Homer De Witt, Groveland, Cal.

Transferred

Rogers, J. B., Napa.
Farmer, Jessie C., Santa Cruz.
Ellsworth, A. D., Fresno.
Griffin, Alonzo P., Ferndale.

Deaths

Word has been received as we go to press of the death of Dr. F. Dudley Tait, of San Francisco. An obituary will appear in the next number.

Hervey, Chas. H., of San Jose; Eclectic Med. Inst., Ohio, '84; died in January, 1918.

Buell, Wm. E., who was Chief Surgeon at the Union Iron Works, San Francisco, Cal., was shot and killed while in the performance of his duties, on Feb. 4, 1918; he was a graduate of the College of Physicians and Surgeons, S. F.

Taylor-Goodman, Dr. Cecelia W., of San Diego, Cal.; Univ. of Michigan, '80; born July 17, 1859; died Jan. 27, 1918.

Chamberlain, Nelson H., of Oakland, Cal.; Med. Dept. Univ. of Michigan, '92; died in Chicago, Illinois Jan. 21, 1918; cause, apoplexy.

Posey, Addison C., of Oakland, Cal.; Kentucky School of Med., Ky., '75; died in Hanford, June 1, 1917, age 65; cause of death, valvular heart trouble.

Smith, Everett Russell, of Los Angeles, Cal.; Rush Med. Coll., '73; died Nov. 17, 1917, in South Pasadena, Cal.; cause, myocarditis.

Thomas, Frank W., of Claremont, Cal.; Starling Med. Coll., Ohio, '80; died Jan. 12, 1918. He was a member of the State Society and Councilor for the Los Angeles County Society, Pomona branch.

Swan, Benjamin R., of San Francisco, Cal.; Coll. Phys. and Surg., New York City, N. Y., '68; died Jan. 28, 1918, age 80.

Ehrlich, D. O. J., of Oakland Cal.; died in San Francisco, Cal., Jan. 23, 1918.

Garlick, P. G., of San Francisco; died Jan. 22, 1918, age 42. He was a graduate of the Hahnemann Hosp. Coll. of the Pacific, '03.

Silva, M. S. de, of Sacramento, Cal.; Coll. Phys. & Surg., San Francisco; died at his home, Jan. 19, 1918, age 55.

Shattuck, Alvin; died in Los Angeles, Cal., Jan. 28, 1918.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

Publication Committee:
E. C. FLEISCHNER, M. D. A. B. GROSSE, M. D. SOL HYMAN, M. D. GEORGE H. EVANS, M. D.

Advertising Committee:
R. E. BERING, M. D. THOS. E. SHUMATE, M. D.
Representative of the Council, E. N. EWER, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn.....Dr. W. H. Walker, Willows
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin.....Dr. W. F. Jones, San Rafael
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa .....
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. P. H. Reilly, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI APRIL, 1918 Number 4

COMMITTEE ON SCIENTIFIC PROGRAM.

VERY IMPORTANT. Your paper, when read, becomes the property of the Medical Society of the State of California and may be published or refused publication in the Journal, according as the judgment of the Publication Committee dictates. The rules require that your paper as read must be left with the Chairman of the Section before which it is read. The new ruling of the Committee requires that a copy of the paper which you will read must be in the hands of the Secretary before it is read at the Society meeting. Therefore, please bring with you an extra copy of your paper to be presented to the Secretary before you deliver your address.

DEL MONTE.

Every person who is expecting to attend the annual meeting at Del Monte on April 16, should make immediate reservation if he does not wish to court disappointment. The state society meeting is placed in the middle of the busy hotel season at Del Monte and rooms will be at a premium. There is every necessity for immediate reservation. Do it now. You can cancel a reservation if absolutely necessary later. You will probably be unable to secure accommodations toward the date of meeting. Railway rates are one and one-half the lowest regular one way fare, on the receipt-certificate plan from all points in California, provided fifty (50) or more are in attendance. When you buy your ticket to go to Del Monte, pay the full fare and get a receipt-certificate. When you get to Del Monte, present this to the State Secretary to be signed and then when you get your return ticket, hand this receipt to the agent and he will give you a return ticket for one-half fare.

Do not fail to get the receipt-certificate, or to have it signed by the State Secretary, for if you do, you have no redress.

Every delegate should make it his first business to attend this session as matters of the utmost importance will come up for consideration. Questions have arisen in which every member of the Society is vitally interested and the delegates who represent large numbers of our members who cannot attend, should be sure to be present, even if at a personal sacrifice.

Secretaries of county units should make it their special duty to attend this meeting so that they may be in a position to explain to their members just what was done and why.

County secretaries can talk more effectively to their members on Society matters by having attended this meeting.

Hotel Rates: Hotel Rates are on the American plan.

Single room without bath, $5.50 per day, one person.

Double room without bath, $10.00 per day, two persons.

Single room with bath, $6.50 per day, one person.

Double room with bath, $12.00 per day, two persons.

VOLUNTEER MEDICAL SERVICE CORPS.

For the purpose of completing the mobilization of the entire medical and surgical resources of the country, the Council of National Defense has authorized and directed the organization of a "Volunteer Medical Service Corps," which is aimed to enlist in the general war-winning program all reputable physicians and surgeons who are not eligible to membership in the Medical Officers' Reserve Corps. It has been recognized always that the medical profession is made up of men whose patriotism is unquestioned and who are eager to serve their country in every way. Slight physical infirmities, or the fact that one is beyond the age limit, fifty-five years, or the fact that one is needed for essential public or institutional service, while precluding active work in camp or field or hospital in the war zone, should not prevent these patriotic physicians from close relation with governmental needs at this time.

Through the Committee on States Activities of the General Medical Board the matter of forming such a nation-wide organization was taken up last October in Chicago at a meeting attended by delegates from forty-six States and the District of Columbia. This committee, of which Dr. Edward Martin and Dr. John D. McLean—both Philadelphians—are respectively chairman and secretary, unanimously endorsed the project.

It is intended that this new Corps shall be an instrument able directly to meet such civil and military needs as are not already provided for. The General Medical Board holds it as axiomatic that the health of the people at home must be maintained as efficiently as in times of peace. The medical service in hospitals, medical colleges and laboratories must be up to standard; the demands incident to examination of drafted soldiers, including the reclamation of men rejected because of comparatively slight physical defects; the need of conserving the health of the families and dependents of enlisted men and the preservation of sanitary conditions,—all these needs must be fully met in time of war as in time of peace. They must be met in spite of the great and unusual depletion of medical talent due to the demands of field and hospital service.

In fact, and in view of the prospective losses in men with which every community is confronted, the General Medical Board believes that the needs at home should be even better met now than ever. The carrying of this double burden will fall heavily upon the physicians, but the medical fraternity is confident that it will acquit itself fully in this regard, its members accepting the tremendous responsibility in the highest spirit of patriotism. It will mean, doubtless, that much service must be gratuitous, but the medical men can be relied upon to do their share of giving freely, and it is certain that inability to pay a fee will never deny needy persons the attention required.

It is proposed that the services rendered by the Volunteer Medical Service Corps shall be in response to a request from the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, or other duly authorized departments or associations, the general administration of the Corps to be vested in a Central Governing Board, which is to be a committee of the General Medical Board of the Council of National Defense. The State Committee of the Medical Section of the Council of National Defense constitutes the Governing Board in each State.

Conditions of membership are not onerous and are such as any qualified practitioner can readily meet. It is proposed that physicians intending to join shall apply by letter to the Secretary of the Central Governing Board, who will send the applicant a printed form, the filling out of which will permit ready classification according to training and experience. The name and data of applicants will be submitted to an Executive Committee of the State Governing Board, and the final acceptance to membership will be by the national governing body. An appropriate button or badge is to be adopted as official insignia.

PHYSICIANS' COMMISSIONS AND THE A. M. A.

In our June issue, under the caption of "There Be Land Rats and Water Rats," we called attention to the practice of the Marks Artificial Limb Company of offering to physicians who were in charge of unfortunates requiring protheses a very large percentage of the cost of the appliances "for taking the measurements." We strongly attacked this procedure as being underhanded and crooked. Noting that the advertisement of these manufacturers was regularly carried by the Journal of the A. M. A., we entered into correspondence with its business manager, who takes the stand that the physician "is entitled to remuneration for such work from the manufacturer," but if the patient pays him for this same work "the physician is dishonorable if he accepts remuneration from the manufacturer." He also thinks that the doctor is justified in accepting a commission provided "he lets the patient know that he has done so."

Not at all! We know, and the business manager of the A. M. A. knows, that when a manufacturer offers a physician 20 or 25 per cent. of a limb that costs two hundred dollars he does it for just one reason. He wants the business. And we also know that the doctor who accepts a commission does not let his patient know it. Will any such manufacturer let a representative of the A. M. A. see the ledger accounts of these men? Will he furnish a list of those physicians to whom he has paid commissions? Will *any* of the physicians who have accepted such commissions state when, and how much he received? Of course not. He accepts a commission of this magnitude for what there is in it. He wants the coin.

It would be interesting to have the manager of the A. M. A. secure such information and publish it.

THE MENTAL HYGIENE MOVEMENT IN CALIFORNIA.

Physicians in California should be conversant with the excellent activities of the California Society for Mental Hygiene, a state branch of a national organization which is giving effective and sadly needed service. The mental hygiene movement is well described as a well-organized endeavor to reduce the alarming amount of mental impairment in the United States by making public careful statements of the causes of mental disease, by securing earlier medical treatment, and by preventive social service with individuals threatened with mental breakdown. The movement also includes a survey of institutions caring for the insane for the purpose of determining the best means for improving standards of care among the 200,000 and more sufferers from mental disease in the United States. The prevention and proper care of mental deficiencies is an important feature of the program.

The California Society is working through various committees covering the following activities: 1. Committee on public meetings. 2. On mental hygiene in national defense. This committee has the important function of trying to segregate feeble-minded girls who would be a menace if allowed at large in the neighborhood of military camps. It is also concerned with the psychological examination of recruits and the selection of men for duties requiring special psychological qualifications as for example, the aviation service. It is concerned with the psychological problems of shock, re-education, vocational training, recreation in the Army and Navy, and the problems arising from emotional instability, fear and self-control. 3. On the commitment of the insane. This committee seeks to secure proper recognition of the fact that the insane are sick and should be treated as sick and not as criminals. 4. On the establishment of a State psychopathic hospital for the care and preventive treatment of acute and curable insanities. 5. On the study and vocational placement of subnormal and super-normal children, with mental tests to determine their status. 6. On the psychological examination, care and treatment of delinquents. 7. On the establishment of county branches of the State Society for Mental Hygiene. 8. On the after-care of the insane. 9. On mental hygiene clinics. 10. On publicity. 11. (Proposed). On the care and treatment of drug addiction.

Let each physician read over this list and see for himself just what function of needed service such an organized program would provide in his own district. It is applicable as much in rural sections as in the cities and towns. The problems are different but the needs are equally great. There should be a branch of this State society in every county in the State, and physicians should be the first to recognize the prime importance of having a well-organized mental hygiene society in their own district.

Physicians should recognize this for several reasons. Among these reasons may be mentioned the effective service that the mental hygiene movement is rendering in driving out the narrow cults and sects of healing so-called, which thrive on ignorance and improper mental training. This is worthy of contemplation. This is, too, aside from the direct results of social, moral and physical improvement which follow such activities as here outlined. The physician in war-time, vastly more even than in peace-time, must have his public conscience sensitive and feel his inherent obligation to serve the community in a public and constructive capacity as well as simply in efficient private medical service.

MEASLES EPIDEMIC.

Never before in the history of the state, according to Dr. W. H. Kellogg, Secretary of the California State Board of Health, have measles and German measles been so prevalent. During 1917 there were 23,500 cases of these diseases reported to the State Board of Health, and during January and February of this year no less than 9,000 cases of these diseases have been reported. While nearly all cases have been of a very mild type, occasionally the disease has appeared in a very severe form.

Since most fatal cases of measles occur in children under five years of age, parents should take special care in protecting very young children from becoming infected. The best way to control measles is to isolate all cases as soon as suspicious symptoms occur. The chief difficulty in the control of the disease lies in the fact that it is more "catching" in the early stages, before any rash appears. Prompt isolation, however, helps to reduce the prevalence of the disease.

The State Board of Health does not advise closing the schools during an epidemic of measles, provided a system of inspection of school children is maintained. The best results are obtained through keeping the schools open and excluding all pupils who show any early symptoms of illness, such as fever, sore throat, or the symptoms of a common cold.

The regulations of the Board require the isolation of all cases of measles and German measles. Health officers and citizens should comply with these regulations in order that the wide prevalence of these diseases may be reduced. The presence of measles among our soldiers will not help to win the war.

DEAD BABY OR DEAD GUINEA PIG.[1]

Within the last few weeks there has been a fresh outbreak of denunciation from a few anti-vivisectionists, on account of statements made at a Commonwealth Club luncheon by Dr. T. W. Huntington, a member of the American Red Cross Commission to Italy and president of the American Surgical Association. It isn't so long since some American contributors to the Red Cross sought to enjoin the society from making use of some of its funds for research by vivisection. It is charitable to assume that some of the objectors don't know what they are doing; and one reason they don't know is that medical men are too prone to treat the objections and denunciations of anti-vivisectionists with silence, so that a large

[1] From the San Francisco Star.

part of the public has no opportunity to learn the truth.

The stock objections and absurd statements of anti-vivisectionists have been disproved scores of times, but refutation has no effect upon the professional objectors, for somewhere among them is an affidavit mill that seems to be kept pretty busy. The professional objectors cannot point to one step of progress, nor to one beneficent discovery that has been made by their efforts, nor "to a single disease that has been abated or abolished by them either in animals or man."

Curiously enough, the anti-vivisectionists, asserting their purpose and great desire to save pain and suffering to the lower animals, have never ceased their objections long enough to learn that vivisection experiments have been of untold benefit to the lower animals by enabling scientific men to find the causes, methods of growth and spread and—in some cases—the means of preventing such disease of the lower animals as tuberculosis, rinderpest, anthrax, glanders, hog cholera, chicken cholera and lumpy jaw, some of which diseases attack human beings.

Those who have given little or no attention to the subject may be interested in a brief résumé of some steps of progress that have been made by vivisectionists through the use of vivisection upon lower animals. Experiments on animals—the great majority of which escape physical suffering when experimented upon—have benefited human beings by leading to:

"The discovery and development of the antiseptic and, later, the aseptic method and thus the splendid results of modern surgery, and not only reducing the mortality but making comparatively safe operations on the stomach, intestines, appendix, liver, pancreas, spleen, kidneys and bladder; and the modern surgery of the brain, which has shown such beneficial results; and has enabled surgeons to operate with fair success and diminishing mortality upon the organs of the chest.

"The almost total abolition of lockjaw after operations and accidents, and the reduction of the mortality after compound (open) fractures from 66 per cent. to less than 1 per cent.; while the mortality after ovariotomy has been reduced from 66 per cent. to less than 4 per cent., and the death rate of hydrophobia has been reduced from 12 per cent. of the persons bitten to less than 1 per cent.; and the death rate of the epidemic form of cerebro-spinal meningitis has been reduced from 75 per cent.—and sometimes 90 per cent.—to less than 20 per cent.

"Reduction of the death rate of tuberculosis by more than 30 per cent., and reduction of the cases and spread of tuberculosis, for Robert Koch's discovery of the tubercle bacillus is the cornerstone of our modern sanitary achievements. Thus, but for experiments upon animals, we would still be in the dark ages of sanitation.

"Abolition of yellow fever, which no longer than thirty years ago was the dread and often the scourge of our Gulf and lower Atlantic States; and such diminution of the ravages of malaria that its abolition in this country is only a matter of time, and without the knowledge thus gained the death rate in the Canal Zone during the construction of the Panama Canal would have been enormous, while actually it was less than in the most healthy parts of this country.

"Reduction of the death rate in diphtheria in all parts of the civilized world. In 1894, when the antitoxin treatment of diphtheria was begun, the mortality from the disease was 79.9 deaths per 100,000 of population, and by 1905 the death rate was only 19 per 100,000—or less than one-quarter of the mortality before the introduction of antitoxin.

"Almost total abolition of childbed fever, once the great peril of maternity, and reduction of the mortality from the disease, from five or ten and sometimes even twenty deaths in 100 mothers to one in 1250 mothers.

"Discovery of anti-typhoid vaccine, which has practically abolished typhoid fever in army camps.

"The marvelous results achieved by Dr. Carrel and other surgeons in the treatment of wounded men on the battle fronts of Europe, as direct results of vivisection experiments upon lower animals. Legs and arms are saved now that surgeons did not dream of trying to save in our Civil War, or even in the Franco-Prussian war, and lives are saved now that could not have been saved then."

We have made no attempt in the foregoing to give a complete list of the benefits of vivisection. It is no exaggeration to say that the field of future experimentation is as large in every direction as the field of past accomplishment, for there is constant progress; and in no department of medicine can it be said that further progress is impossible.

Mention has been made above of the benefits of vivisection to the lower animals themselves. It may be added that in 1914, when John D. Rockefeller gave $1,000,000 to extend the work of the Rockefeller Institute to the study of *lower animal diseases,* in a laboratory to be established in New Jersey, the Governor of New Jersey was persuaded by anti-vivisectionists to veto the bill authorizing that humane work.

Some years ago the late S. Weir Mitchell visited the Anti-Vivisection Exhibition in Philadelphia, and after viewing the exhibits said to his guide: "Your exhibition is not quite complete. You should place here a dead baby and there a dead guinea pig with the motto, 'Choose Between Them.' "

DISTINCTION BETWEEN MEDICAL DEFENSE AND INDEMNITY DEFENSE FUND.

Owing to some existing confusion as to just what the Society does for a member accused of alleged malpractice, we shall endeavor, in a few words, to clarify the matter. One of the purposes of our Society, as defined by the Constitution and By-Laws, is to protect our members from imposition and defend them from groundless charges.

A member in good standing whose dues are fully paid, is entitled to the services of the Society's Law Department in his defense and to the payment by the Society of the court costs involved. This is termed Medical Defense. Compliance with our Medical Defense Rules is, of course,

necessary. While the Society thus furnishes the legal assistance and court costs, this does not mean that it undertakes to pay any judgment secured against a member.

A member in good standing, whose dues are fully paid, may also, at his option, join the Indemnity Defense Fund. As to such claims or suits arising out of his practice for services thereafter rendered by him, he is entitled to the protection of the fund as well, as defined by its rules, termed Coverage Rules. This coverage on a single claim is $5,000, depending on the extent of the Fund and the priority of the claim.

Any member may also, at his option, secure insurance from as many insurance companies as he desires. A member not belonging to the Fund, but insured in one or more companies, must, if a claim is made or suit filed against him, elect whether his insurance company or the Society shall handle his defense. In such cases, the Society can give only general cooperation.

But, if a member is covered by the Fund, and is also insured, the Legal Department will actively handle the claim or case and participate in his defense with the attorneys for the insurance company.

We have no hesitancy in recommending all our members to join the Fund and to carry as well, at least one policy of insurance with an established insurance company.

EDITORIAL COMMENT.

An entertaining and vastly instructive booklet is published by Dr. Lulu Hunt Peters of Los Angeles under the suggestive caption, "Diet and Health, with Key to the Calories." It would be worth while for every doctor to have a copy, even though the booklet is designed for lay consumption. The attention of the obese is secured on the first page by the declaration that "in war time it is a crime to hoard food,—yet hundreds of thousands are hoarding food, and that one of the most precious of all foods. They have vast amounts of this valuable commodity stored away in their own anatomy."

The point is well taken and it ought to be considered a patriotic disgrace in these war times for any individual to exhibit or harbor undue embonpoint. While we doctors are thus preaching, let us turn a timely eye toward our own proportions. For charity begins at home and so should patriotism. Physical efficiency is a patriotic duty for men and women alike. Obesity is *lése majeste*. Let us be patriotically thin. And read Dr. Peters' booklet.

Continuing, the author gives some excellent definitions, after this fashion. "Medical Trust,—The A. M. A., a powerful trust you can't get into unless you have a high preliminary education and are a graduate of a high-class medical college. Eleven years' training after the grammar school is their minimum standard now." "League for Medical Freedom,—In reality a league for medical ignorance. The opponent of the above-mentioned trust. Their standard,—any old kind of medical or religious training three months or longer, engrafted on any one who has the money to pay for the course. No education no barrier; in fact, these make the loudest boosters for the league. In justice I must say that many splendid estimable people belong to this, not knowing these facts."

The medical profession of Great Britain, as a result of five years' experience, has expressed its approval of universal health insurance. A comprehensive inquiry has been conducted by a committee of the British Medical Association among all local branches and panel committees. Its report on the attitude of the physicians says: "The degree of unanimity so far disclosed is somewhat remarkable." This indicates a significant change of view on the part of the profession as a whole, since at the outset health insurance was "the most highly controversial subject that has ever been before the profession." The investigation shows that the Act is to-day regarded as a distinct gain to the profession as well as to the public health.

In the last annual report of the Secretary of the Interior, the Honorable Franklin K. Lane, occur these words: "The spirit of the people is the making of the nation. The extent to which a people can co-operate marks the point of civilization they have reached. The greatest outstanding fact of the past year is that under the crystallizing influence of a common danger and under the inspiring impulse of a common purpose, Americans are quick to come together." A sentiment surely worthy of all emulation among physicians, whose constant contention it should be, who best can serve and best agree.

The Publication Committee of the JOURNAL is glad to announce that the congestion of manuscripts on hand has been relieved and all papers submitted for publication will be considered on their intrinsic merits.

According to the figures of the last available census, that of 1910, New York's foreign born population numbered almost two millions. Of these, Russia contributed 483,580; Italy, 340,524; Germany, 279,242; Ireland, 252,528; Austria, 193,203; and other countries considerably less. According to the New York Department of Health, it thus appears that New York's Russian-born population makes a city nearly as large as Odessa; its Italian members are enough to populate Trieste and Venice combined; and its German constituency is larger than that of the city of Bremen. About one million of the population are Jewish.

It is important to remember that, while typhoid fever is a sanitary crime, it frequently devolves upon the physician to treat it, and the physician is responsible for doing his part to prevent its further spread. Home treatment is always undesirable and should only be permitted when hospital facilities are unavailable. Visitors should be excluded, stools and urine efficiently disinfected, and every member of the family and person in contact with the case, who has not had typhoid, should be vaccinated against it. Urine and feces should invariably be examined bacteriologically not later than the tenth day after normal temperature is established. This is of the utmost importance in order to control the carrier problem.

Original Articles

SPASMODIC VASO-MOTOR DISTURBANCES OF THE RESPIRATORY TRACT, WITH SPECIAL REFERENCE TO HAY FEVER.

A Preliminary Report.

By GRANT SELFRIDGE, M. D., San Francisco.

The consensus of opinion put forward within the past two years, as is shown in the literature, seems to indicate definitely that spasmodic vaso-motor disturbances of the nose, including hay fever and asthma likewise, are all anaphylactic or sensitized states, due to proteid poisoning of bacteria, food products, pollens, animal dandruff and animal hair. There also seems to be increasing evidence showing the influence of endocrine glands, especially the adrenals, as well as the sexual glands, thyroid and possibly the pituitary.

Beck, in a recent article on "Relation of the Glands of Internal Secretion in Oto-Laryngology," speaks of hyperplastic ethmoiditis, a condition accompanied by marked irritability of the nasal mucous membrane, with sneezing and hypersecretion, as a rarefying process, the result of a primary infection, plus a dysharmony of one or more of the internal glands. He also states definitely that he has not seen any permanent results from surgical procedure alone. This latter point will be referred to later, when discussing hay fever, also personal experiences with evident internal gland disorders will be shown when reporting cases of spasmodic sneezing in its relation to bacterial proteid and food proteid absorption.

There seems to be a misconception among many medical men as to the underlying factors in vaso-motor disturbances of the upper and lower air passages.

This schematic drawing taken from Falta's work on the "Ductless Glandular Disturbances" is to illustrate the origin and distribution of the autonomic nervous system.

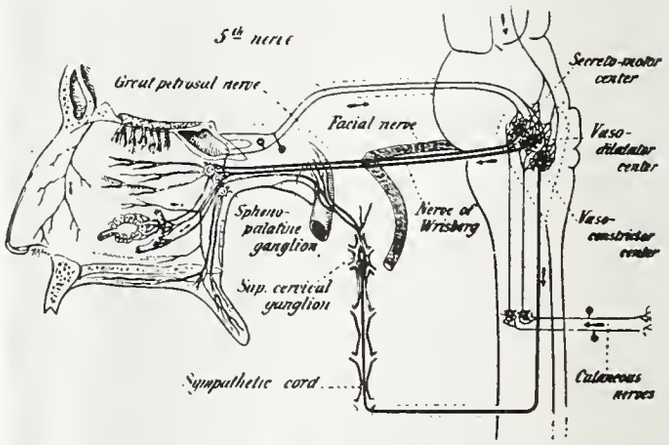


Chart No. 2 is taken from Brubaker's article in the Transactions of the American Laryngological Association, 1916, showing the relationship of the medulla with the nose (the afferent and efferent fibres). A careful study of the original article gives a clearer understanding of the reflexes than any article that has yet been published in American literature.

Inasmuch as vaso-motor instability appears to be the key to the situation, it therefore seems expedient to refer briefly to the anatomy of the vegetative portion of the nervous system. The vegetative system, consisting of the autonomic and sympathetic portions, has its origin in the brain and spinal cord. The sympathetic begins at the second thoracic and extends downward to include the second lumbar, while the autonomic arises partly in the brain stem and from the sacral region of the cord. The autonomic fibres of the third go to the ciliary ganglion and the seventh, ninth, tenth and eleventh

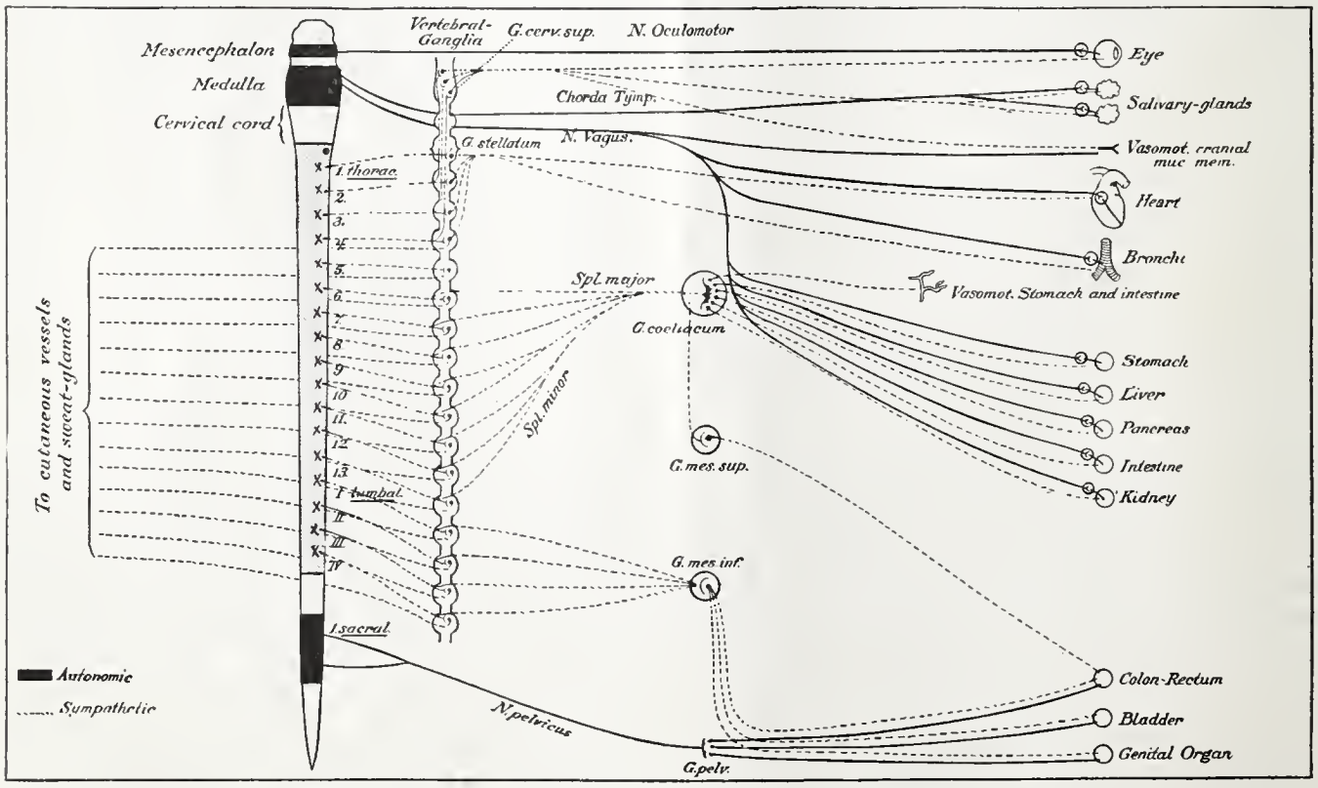


Fig. 2.—Diagram of the vegetative nervous system (acco rding to H. H. Meyer and R. Gottlieb). The autonomous innervation is black, the sympathetic broken lines.

cranial go to the nasal ganglion (the spheno-palatine) and from thence innervate the blood supply of the entire nose, sinuses, heart, bronchi, stomach and intestines. The first, second and third sacral, through the pelvic plexus, supply the lower colon and other pelvic contents, including the genital organs (J. S. Frazer, Nasal Neurosis, Edinburg Med. Journal, August, 1917). It has been stated that it is impossible to separate the autonomic from the sympathetic; that they are antagonistic to each other, but that there should be an equal balance between them in order that the organs supplied should functionate properly; that if the autonomic side is over activated or irritated by some substance, i. e., secretion from some endocrine gland or protein, we have a vagatonia with excessive secretion and spasm; that if the sympathetic side is over-activated we have a sympatheticotonia with no secretion and relaxation. In other words, spasmodic affections of the respiratory tract, hay fever, true or false, as well as asthma, come under the group of vagatonias and the ordinary vaso-motor rhinitis with alternating stoppage of the nose accompanied by relaxed membrane and no discharge, comes under the group of sympatheticotonias.

It therefore seems to me that there must be a state of general hypersensitiveness due either to hereditary abnormalities in the endocrine glands, syphilis or focal infections, before local hypersensitiveness can develop in the nose. The local hypersensitiveness may be influenced by nasal abnormalities or deflected septa, but according to hay fever workers, Goodale, Oppenheim, Scheppegrell and others, this is rarely, if ever, true in pollinosis. Repeated doses of tox-albumin or proteids, be they pollens, food or animal hair proteids, seem necessary before local hypersensitization is accomplished.

This brings us to the consideration of the grouping of spasmodic vaso-motor disturbances, or anaphylaxis of the air passages into three types:

* 1. Inspired,
2. Ingested,
3. Bacterial.

The *inspired* are pollens, proteid particles from the air or dandruff of animals, horses, cats, dogs, sheep, cattle, guinea pigs and chicken feathers, face powders, orris root, flour, etc.

The *ingested* cover the entire group of foodstuffs, fruit, vegetables, breadstuffs, animal food, sea products, nuts, beverages, as coffee, tea, chocolate and alcohol.

The *bacterial,* focal infections from accessory sinuses, tonsils, teeth, gallbladder, appendix, intestines, etc. *

REASONS FOR TAKING UP THE WORK.

About three years ago, following the reading of Goodale's article on "Anaphylactic Reactions in Horse Asthma and Allied Conditions," Talbot's article on "Egg Poisoning" and Cook's article on "Hay Fever," I became interested in the study of spasmodic vaso-motor disturbances of the upper and lower air passages. Shortly after the study of these articles I had a conversation with a Southern Pacific engineer referred from Los Angeles for treatment as to his lack of efficiency during the supposed hay fever period. As a result of that conversation I concluded there was a decidedly economic side to the hay fever question, in so far as it concerned the Southern Pacific Company, and I therefore asked my chief, Dr. Frank Ainsworth, if he would send a circular letter out to the hospital staff of the entire system, to determine if possible the number of hay fever victims among the railroad employees reporting yearly for relief. It was found that five hundred cases reported yearly, and of this number about two hundred were located in California. These reports suggested that the statement made to the President of the American Hay Fever Prevention Association by the California State Board of Health was incorrect, that hay fever in the state was rare. True, it is difficult to get any idea of the percentage of population in the state who are hay fever sufferers and to what type (spring or fall) they belong. Apparently, however, the early spring cases are more common, especially in the towns of Chico, Woodland, Colusa and Oroville, while in the lower San Joaquin Valley the late summer and fall type seems to predominate. From the wide distribution and profusion of the flora, it suggests that the percentages will increase when the non-bacterial types of colds are studied more closely and when true hay fever sufferers are shown that some relief can be given them.

From the reports received, answering, "what plants were thought to be responsible for hay fever," the following grasses and plants were reported:

Blue grass, Johnson grass, velvet grass, orchard grass, timothy, wild oats, alfalfa, greasewood, giant ragweed, common ragweed, sagebrush, figweed, dandelion, locust, roses, lily-of-valley, orange, olive, sweetpea, mustard, tarweed, sunflower, coreopsis, clover, willow, wall flower, asparagus plant, tree of heaven, pines, almonds, prunes, cottonwood, balm of Gilead—32 in all.

The work of eastern men (Goodale, Oppenheim) suggests that the following list submitted by Cooke represents the hay fever producing plants in the eastern states. He divides them as follows:

Type A. Grammaceæ, timothy, wheat, red top, low spear, sweet vernal, mullein, rye.

Type B. Flowers, rose, daisy, lilac, dandelion.

Type C. Trees and shrubs, locust, chestnut, pine, maple, privet.

Fall type. Ragweed, goldenrod, aster, chrysanthemum, nasturtium, clematis, spartina, sticata.

A careful study of the above lists forced me to the conclusion that the only satisfactory way to determine the flora responsible for hay fever in the west was to have made a careful botanical survey of the districts in California and Nevada where hay fever was known to exist, and I therefore first sent in July, 1916, a third year student of botany into the districts of Bakersfield, McKittrick and Hanford. The result of this study covered one hundred and twenty plants, grasses and shrubs. Following this, in September, 1916, I sent Professor Hall, Chief of Botany at the University of California, to Woodland, Colusa and Chico, where he made a very careful survey of the late summer and fall flora. In April of this

* This compilation was made up from the Boston Medical and Surgical Journal.

year a similar survey was made of this same district for the spring flora. In June, July and August, 1917, a survey of Nevada was made by Professor Hall which included the districts of Reno, Goldfield, Tonopah, Elko and Ogden, Utah, and the S. P. right of way from Benicia to Ogden.

During the past winter a compilation of one hundred and twenty of the western flora was made, showing the known habitat of each, from the Mexican border to the Canadian line and from the Pacific Coast to Colorado. This vast and comprehensive work was done by Professor Hall and presented to me for the good of the cause.

It is now pretty generally understood that pollen fertilization is air borne, or insect carried. Dr. Scheppegrell, President of the American Hay Fever Prevention Association, has in his writings shown very clearly that the air-borne pollens are the principal offenders and that many of Cook's and Goodale's lists have little to do with the causing of hay fever except by direct inhalation of the pollen from the flowers. It is therefore to this class of air-borne pollen producers that our efforts have been directed during the past two years.

The western states seem in comparison to the eastern states in the production of hay fever provokers, to have been the dumping ground of the world so far as the flora go; and we have found in our botanical studies and biological tests several blue ribbon winners among the pollens as compared to the eastern ones, when it comes to their toxic properties.

The following is the list as compiled by Professor Hall of the most important hay fever producing trees, grasses and shrubs:

Coniferae.
Cupressus, cypress (wind borne).
Juniperus, including sabina, junipers (wind borne).
Pinus, many species, pines (wind borne).

Gnetaceae.
Ephedra nevadense, desert tea (wind borne).

Zygophyllacea.
Larrea tridentata, creosote bush (insect borne).

Salicaceae.
*Populus fremontii, fremont cottonwood (wind borne).
Salix, many species, willow (insect borne).

Cupuliferae.
Quercus, oak (wind borne).

Leguminosae.
Robinia pseudacacia, locust tree.

Polygonaceae.
Rumex conglomeratus, clustered green dock (wind carried).
Rumex crispus, curly dock (wind carried).

Cyperaceae.
Scirpus lacustris, tule (wind carried).
Scirpus robustus, bulrush (wind carried).

Juglandaceae.
*Juglans hindsii, Northern Cal. black walnut.

Gramineae (all wind carried).
Agropyron pseudorepens, false couch grass.
*Agrostis alba, red top.
*Andropogon halepense, Johnson grass.
*Avena, oats.
*Bromus villosus (maximus), broncho grass, or needle grass.
*Cyndon dactylon, Bermuda grass.
*Dactylis glomerata, orchard grass.
*Distichlis spicata, salt grass.
*Elymus condensatus, giant rye grass.
*Elymus triticoides, slender wild rye.
Gastridium lendigerum, nit grass.
*Lolium perenne and varieties, ray grass.
*Phleum pratense, timothy.
Sporobolus asperifolius, rough leaved salt grass.
Sporobolus depacuperatus.

***Chenopodiaceae** (supposed to be wind carried, but possibly by minute insects).
Atriplex bracteosa, salt bush (that from Woodland is same as atriplex rosea, red orache).
Atriplex canescens, shad scale.
Atriplex species, salt bushes.
*Chenopodium album, lamb's quarters or white goosefoot, or pigweed.
Chenopodium ambrosiodes, Mexican tea.
Chenopodium anthelminticum, wormseed.
Grayia spinosa, hop sage.
Salicornia species, pickleweed.
*Salsola kali, Russian thistle.
*Sarcobatus, vermiculatus, black greasewood.
*Spirostachys occidentalis, iodine bush.
Suaeda species, sea blite, alkali blite.

Urticaceae.
Urtica holosericea, creek nettle (wind carried).

Amaranthiceae.
*Amaranthus graecizans, tumbleweed (wind carried).
*Amaranthus retroflexus, rough pigweed (wind carried).

COMPOSITAE.

Mayweed Tribe.
Artemisia dracunculoides, Indian hair tonic (wind carried).
Artemisia absinthium, European wormwood (wind carried).
Artemisia biennis, biennial wormwood (wind carried).
*Artemisia californica, California old man (wind carried).
Artemisia frigida, pasture sagebrush (wind carried).
*Artemisia heterophylla, mugwort (wind carried).
*Artemisia ludoviciana, mugwort (wind carried).
Artemisia spinescens, bud brush (wind carried).
*Artemisia tridentata, sagebrush (wind carried).
*Achillea millefolium, yarrow (insect carried).
Anthemis cotula, mayweed or dog fennel (insect carried).

Ragweed Tribe.
*Ambrosia psilostachya, western ragweed (wind carried).
Dicoria canescens (wind carried).
Franseria chamissonis (wind carried).
Franseria bipinnatifida (wind carried).
Franseria dumosa, sand bur (wind carried).
*Franseria tenuifolia (wind carried).
*Hymenoclea salsola (wind carried).
*Iva axillaris, povertyweed, western elder (wind carried).
Iva nevadensis, Nevada ragweed (wind carried).
*Iva xanthifolia (wind carried).
*Xanthium pennsylvanicum, cocklebur (wind carried).
*Xanthium spinosum, spiny clotbur (wind carried).
Franseria acanthicarpa, false ragweed (wind carried).

Aster Tribe.
Solidago californica, Calif. goldenrod (insect carried).
Aster exilis, slim aster (insect carried).
Chrysothamnus nauseosus, rabbit bush (insect carried).
Grindelia camporum, gum plant (insect carried).
*Heterotheca grandiflora, telegraph plant (insect carried).
Isocoma veneta acradenia (insect carried).
Monoptilon hellioides, desert aster (insect carried).
Solidago occidentalis, western goldenrod (insect carried).

Sunflower Tribe.
Encelia eriocephala, desert sunflower (insect carried).

Helianthus annuus, sunflower (insect carried).
Bidens pilosa, beggar ticks (insect carried).
Bidens vulgata, beggar ticks (insect carried).

Sneezeweed Tribe.

Helenium puberulum, sneezeweed (insect carried).
Baeria chrysostoma, goldfields (insect carried).

Tarweed Tribe.

Centaurea melitensis, Napa thistle (insect carried).
Centrodamia fitchii, Fitch's spikeweed (insect carried).
Centromadia pungens and var. parryi, spikeweed (insect carried).
Hemizonia fasciculata, ramosissima (insect carried).
Hemizonia heermannii (insect carried).
Hemizonia luzulaefolia, hay field tarweed (insect carried).
Hemizonia virgata, virgate tarweed (insect carried).
Madia elegans, madia (insect carried).
Madia sativa, Chile tarweed (insect carried).
Centaurea melitensis, Napa thistle, tarweed (insect carried).
Centaurea acanthicarpa, false ragweed (insect carried).

Note—Those marked * have been tested out and found positive.

POSSIBLE HAY FEVER PLANTS, OF SECONDARY IMPORTANCE.

1. COMPOSITAE.

Artemisia cana, especially in Rocky Mountain states.
Artemisia canadensis, especially in Rocky Mountain states.
Artemisia discolor, especially in Rocky Mountain states.
Artemisia pycnocephala, along the coast.
Artemisia rigida, especially in Eastern Nevada.
Baccharis pilularis, coast hills.
Baccharis viminea, guatemote.
Coreopsis species, related to **Bidens**.
Erigeron canadense, horseweed, probably by direct inhalation only.
Franseria, a few additional species in Southern California.
Gnaphalium (and related genera), the everlastings, are perhaps wind pollenated.

2. CHENOPODIACEAE.

Beta vulgaris, beet.
Eurotia lanata, winter fat or cotton brush, Great Basin.
Kochia americana and **K. californica**, alkali flats of the interior.
Nitrophila occidentalis, alkali districts.

3. GRAMINEAE.

Agropyron, several species in addition to the one given but not abundant.
Agrostis microphylla, small leaf, redtop.
Agrostis exarata, white top, Nevada, etc.
Beckmannia erucaeformis (slough grass).
Bromus rubena, red brome.
Digitaria sanguinalis (crab grass).
Echinochloa (barnyard grass).
Festuca spp (fescue).
Holcus lanatus (velvet grass).
Hordeum, several species, includes "Fox Tail," etc.
Leptochloa imbricata (slender grass).
Panicum pacificum (panic grass).
Pleuraphis rigida (gailleta grass), deserts.
Poa annus (walk grass).
Poa brachyglossa.
Poa buckleyana, Buckley's blue grass, especially in hay, Nevada.
Poa pratensis (Kentucky blue grass).
Puccinellia airoides (alkali meadow grass), deserts and Nevada.
Sitanion, several species, usually scattered but reported common in Goldfield.

Many more grasses occur and may be important locally, but not abundant over large areas. In addition, the following cultivated grasses should be considered: Timothy, red top, oats, wheat, rice, rye, barley, indian corn, and kaffir corn.

CLASSIFICATION OF GRASSES.

1. **Corn Tribe.**
   Indian corn (zea mays).
2. **Sorghum Tribe** (andropogoneae).
   Sorghum (andropogon sorghum).
   Johnson grass (andropogon halepensis).
   Sudan grass (andropogon sorghum var.).
3. **Zoysia Tribe** (zoysieae).
   Gailleta grass (pleuraphis rigida).
   Curly mesquite (hilaria cenchroides).
4. **Millet Tribe** (paniceae).
   Crab grass (digitaria sanguinalis).
   Knot grass (paspalum distichum).
   Barnyard grass (echinochloa crus-galli).
   Millet, kaffir corn, etc. (panicum spp.).
   Bur grass (cenchrus tribuloides).
5. **Rice Tribe** (oryzeae).
   Rice (oryza sativa).
   Wild rice (zizania aquatica).
6. **Canary Grass Tribe** (philarideae).
   Canary grass (phalaris canariensis).
7. **Bent Grass Tribe** (agrostideae).
   Red top (agrostis alba).
   White top (agrostis exarata).
   Timothy (phleum pratense).
   Tawny beard grass (polypogon monspeliensis).
   Water beard grass (polypogon littoralis).
   Nit grass (gastridium lendigerum).
   Bunch grass (stiba pulchro and others).
   Rough leaved salt grass (true salt grass in Tribe X), (sporobolus asperifolius).
8. **Oats Tribe** (aveneae).
   Oats (avena sativa).
   Wild oats (avena fatua and barbata).
   Velvet grass (holcus lanatus).
9. **Finger Grass Tribe** (chloridcae).
   Bermuda grass (cynodon dactylon).
   Slough grass (beckmannia erucaeformis).
   Grama grasses (bouteloua spp.).
   Slender grass (leptochloa imbricata).
10. **Fescue Tribe** (festuccae).
    Fescue grass (festuca spp.).
    Salt grass (distichlis spicata).
    Orchard grass (dactylis glomerata).
    Blue grass (poa pratensis).
    Walk grass (poa annua).
    Brome grass (bromus tectorum).
    Broncho grass or needle grass (bromus villosus).
    Red brome (bromus rubens).
    Low tridens (tridens pulchellus).
    Alkali meadow grass (puccinellia airoides).
*11. **Barley Tribe** (hordeae).
    Barley (hordeum vulgare).
    Barley grass (erroneously called Fox Tail), (hordeum murinum).
    Ticklegrass or Squirrel Tail (hordeum jubatum).
    Meadow wild barley (hordeum nodosum).
    Rye grass (lolum perenne).
    Wheat (triticum aestivum).
    Slender wheat grass (agropyron tenerum).
    Rye (secale cereale).
    Giant wild rye (elymus condensatus).
    Glaucous wild rye (elymus glaucus).
    Slender wild rye (elymus triticoides).
    Sitanion (sitanion spp.).

S. P. RIGHT OF WAY.

Sacramento Valley.

Spring:
Sitanion,
Dock,
Wild oats,
Barley grass,
Meadow barley grass,
Bunch grass,
Needle grass,

Soft cheese,
Canary grass,
Ray grass,
Johnson grass,
Bermuda grass,
Povertyweed,
Cottonwood.

Summer and Fall:

Mugwart,
Ragweed,
Cocklebur,
Lamb's quarters,
Russian thistle,
Salt bush,
Salt grass,
Povertyweed.

MODESTO.

Spring and Early Summer:

Johnson grass (andropogon halepense).
Barley grass (hordeum micronium).
Crab grass (digitaria sanguinalis).
Cocklebur (xanthium pennsylvanicum), all seasons.
N. Cal. black walnut (juglans hindsii).
Wheat and barley.
Cottonwood (populus fremontii).

Summer and Fall:

Russian thistle (salsola kali).
Mugwart (artemisia heterophylla).
West ragweed (ambrosia psilostachya).
Barnyard grass (echinochloa crus-galli).
Bermuda grass (cynodon dactylon).
Biennial wormwood (artemisia biennial).
Indian hair tonic (artemisia dracunculoides).
Povertyweed (iva axillaris).
Mexican tea (chenopodium ambrosioides).
Pigweed (chenopodium album).
Rough pigweed (amaranthus retroflexus).
Tumbleweed (amaranthus graecizans).
Spiny clot bur (xanthium spinosum).
Indian corn (zea mays).
Millet kaffir corn (panicum).
Salt grass (distichlis spicata).
Dock (rumex).

Following are common at Modesto but probably have little to do with hay fever:

Valley Oak (quercus lobata).
Horseweed (erijeron canadense).
Spikeweed (hemizonia pungens).
Virgate tarweed (hemizonia virgate).
Gum plant (grindelia camporum).
Sunflower (helianthus annus).
Telegraph plant (heterotheca grandiflora).
Alfalfa (medicago sativa).

Note—The above shows the general scheme of Botanical surveys of localities, and is given with the hope that it will stimulate others to study further the problems involved in the Hay Fever question in the West.

The botanical survey of the districts is of great value, in that one can more readily determine the probable offender and eliminate unnecessary testing. In some instances, however, it seems to be worth while to use an atmospheric plate or better to have the victim wear a Hitchins campaign button in which is mounted a microscopic cover glass. This is smeared with glycerine and worn in the locality where the hay fever attacks begin. The pollens caught thereon are readily identified by the microscope.

During the past two years we have had collected through the Botanical Department of the University of California, University of Arizona and through the U. S. Agricultural Experimental Station at Logan, Utah, one hundred and forty pollens, many of which have been used in experimental work.

BIOLOGICAL TESTS.

We have followed Goodale's method in the preparation of solutions for testing purposes, except the addition of glycerine, one-half gr. by weight of pure pollen is ground up in a mortar with two drops of glycerine and two drops of normal salt solution for several minutes. Then one drachm of salt solution is added. This is allowed to macerate for several hours when enough alcohol is added to make one-half ounce of 1/16 alcohol by weight. After this has stood for several days the supernatant fluid is withdrawn and put in a sterile amber-colored bottle with a rubber cap. Tests are made on the flexor surface of the forearm, keeping one inch away from the bend of the arm. Wash gently with alcohol and make small scratches about 1½ inches apart and about ⅛ inch long, care being taken not to draw blood. A little, however, makes no difference. The rubber caps are cleaned and a sterile syringe used. A drop is put on the scratch and rubbed gently with a glass rod. Clean the syringe and needle with sterile water and repeat with each solution to be tried. If a reaction occurs, it will appear inside of twenty-five minutes as a hive surrounded by a reddish zone. It may or it may not itch. For purposes of record, ¼ cm. in diameter = +; ½ cm. in diameter = ++; ¾ cm. in diameter = +++; 1 cm. in diameter = ++++.

The reaction showing the largest is the one ordinarily most active and usually the pollen representing this is sprinkled into one nostril in minute quantity. A more or less severe attack of hay fever is produced usually inside of sixty seconds which may last from three to twenty-four hours. This is done as a confirmation of the skin reaction.

SEROLOGY.

The sero-biological work, as done by Goodale, indicates that one pollen from a given order will suffice for all that order. His work on grasses, for instance, is confined to twenty-one, all of which reacted alike. These belong to eight species and eight occur in one species, twenty occur in California.

There are three hundred and twenty-five grasses in this state, fifty-three of which representing the most important, are divided into *eleven* species. It seems to me that a very careful testing of the more important of each of these species should be made, and the same thing done with the Artemisias, Chenopods, and ragweeds before his results can be accepted. While a patient sensitive to grasses may react to several, it has been seen frequently here that some may show one or two very large and intense reactions to the grasses known to grow in the patient's locality and the same patient may react in a lesser degree to a grass not growing in that locality. It would seem more logical to use the grass pollen from the patient's locality and the one giving the more severe reaction rather than the foreign one giving the lesser reaction. The same thing applies to Chenopods, Artemisias and Ambrosias.

During the past eighteen months I have seen seventy-six cases of supposed hay fever. Of this number

53 reacted positively to pollen proteid skin tests,
19 appeared to be due to focal infections,

2 reacted to horse hair proteid alone,
2 reacted to egg albumen alone,
2 showed urinary acidosis not associated with pollenosis.

Of the cases of pollenosis fourteen were treated with pollen extracts; ten began treatment two or three months prior to time of expected attacks. Of these, eight had 90 per cent. relief for the season. The other four were considerably relieved but no doubt were sensitive to other pollens not tried, but which our botanical survey proved to be prevalent in their territory. Two were treated until the end of the season, and naturally, results were not anticipated. Two kept up their treatment indifferently and while benefited somewhat, the result was unsatisfactory. In one instance, the patient, who lives at Klamath Falls, may have been sensitive to other pollens not tried. This can only be determined by either a botanical survey of his district or the identification microscopically of pollens caught on atmospheric plates.

The other case, a resident of Tonopah, was relieved early in the season. He was, however, indifferent as to the time of taking his injections and proved by later skin tests to be sensitive to other things discovered by Professor Hall in his August survey of that territory.

Several observers (Hitchins, Cooke, Koessler and some others) report from 60 to 75 per cent. of their cases cured in various ways. Perhaps this percentage will be higher when the cases are more carefully differentiated as to the causes of the anaphylaxis, pollenosis, food allergy, bacterial sensitization and disturbed endocrine glands, and with a perfected method of preparation and standardization, which will be freed entirely of the possibility of autolysis in the higher dilutions within a period of less than twelve months.

From the seventy-six cases seen, I wish briefly to give the histories of four in order to illustrate the difficulties involved in diagnosing hay fever:

Case 1. Miss G., age 27, resident of Nevada, says usually her attacks occur during August and September, though often in spring, but she has attacks of sneezing all year around. If she got in the dust or near certain flowers, sweet peas, roses, coreopsis, etc., she had attacks and also when she used orris root, face powder and sachet. Of the ingested foods, apples and strawberries seem to disagree with her, and if she eats walnuts she immediately gets an angio-neurotic swelling of the tongue. She was tested with thirty-six different pollens with negative results, tested with thirty-nine food proteins, and showed a marked sensitization to walnuts and slightly to cabbage, peas, cocoa; slight reaction to streptococcus. She gives a history of attacks of yellow discharge from her nose anteriorly and posteriorly principally from the left side. She showed some signs of internal gland disturbance, and was then referred to Dr. Moffitt for further investigation. She was sent back to me with the recommendation that the infection in the sinuses be cleared up. Both antra were opened and drained. Patient referred back to Dr. Moffitt, who put her on ovarian extract, one grain three times per diem.

She reports that she has gone all of her so-called hay fever season without any disturbance and seems to be in better physical condition than she has been for several years.

Case 2. Mrs. ——— consulted me in January, 1916, with a history of frequent attacks of sneezing, itching of eyes and stoppage of nose, and watery discharge. These attacks were so severe that she would soak a kitchen roller towel containing two and one-half yards of material. It was possible to squeeze the secretion from the towel. She had a small pair of tonsils, some bogginess of the tubercles of the septum and also of the middle and lower turbinates. These areas were touched up with a monochloratic acid several times without relief. Calcium salts were given her without relief. Bicarbonate of soda, thirty grains four times a day, was give internally without result, this being given though no acetone was present. Finally in desperation, she was asked what she ate to excess, and replied eggs and grapefruit. The following day she was tested out with the white of egg and grapefruit, and gave a marked reaction to white of egg. Eggs were stopped, which was followed by a 50 per cent. improvement. She was then referred to Dr. Cooper, who reported that the young woman had a small goitre and some symptoms of hypothyroidism. She was put on small doses of thyroid and in a comparatively short time was relieved of all her symptoms. During the past year she has had frequent relapses owing to discontinuance of her thyroid and eating eggs. She has been told that her cure cannot be permanent unless eggs are entirely eliminated from her diet.

Case 3. Mr. L., a baker by occupation, consulted me September, 1916. He complained of difficult breathing with alternating stoppage of the nose; says he sneezes all the year but particularly when he is making bread. He eats a great deal of bread and potatoes. Examination of nose showed a high deflection of the septum. The bony structure of the lower turbinates seemed excessive and the nose unnaturally narrow. He also had large tonsils with cheesy material. These conditions were corrected without apparent relief. Skin tests were made for the grains and he was found active to wheat, barley, rice, potatoes and corn. His starch intake was materially reduced with considerable improvement. I am now contemplating an attempt to build up his immunity with an extract of flour.

Case 4. Doctor R., resident of Reno, has had hay fever so badly for twelve years that he contemplated moving to San Francisco to get away from his trouble. There is no history of asthma, bronchitis, or pneumonia in family. His attacks begin in June, are most severe in August and last until frost. He gets hives from eating melons. The odor of bay rum or eau de quinine makes him sneeze. He eats a great deal of bread, potatoes and rice. Has no trouble in his nose, but has diseased tonsils and a history of chronic appendix.

He gave a skin reaction to several of the chenopod family, sagebrush and ragweed tribes; also a slight reaction to horse hair proteids; slight reaction to wheat, rice, potatoes and casein. He was given injections of greasewood, mugwort and western ragweed in strengths beginning with 1/50,000 and increased to 1/5,000, and had absolute relief until August 15, when he had a severe attack. I tested him with four additional chenopods, Russian thistle, povertyweed, salt grass and red orache, and obtained reactions. These were added to his solutions and after the first dose complete relief was obtained until the first frost, which is the close of the hay fever season.

One of the principal problems to be met in the future handling of hay fever cases is the attitude of certain manufacturing drug houses who have invaded sections of the west with their pollen vaccines. I refer particularly to the Lederle Antitoxin Laboratory of New York City, which in a circular states:

"1st—Favorable result followed as a prophylactic against hay fever in 83% of cases.

"2nd—In the treatment of hay fever favorable results followed in 89% of the cases.

"3rd—Marked asthmatic symptoms were associated with 55% of the cases. The symptoms were relieved in 84.2% of the cases."

In a personal letter to me they state: "It is a carefully standardized vaccine from the pollens of timothy, red top, June grass, orchard grass, wheat, sorrel, dock, daisy, maize, ragweed, goldenrod, all of which are known to be important factors in causing hay fever in the spring, summer and fall. Hence our vaccine offers protection against each individual pollen mentioned, as well as against all the pollens collectively."

The Mulford Company puts out two preparations, one for the spring type and one for the fall type. Their mixture corresponds botanically to the Lederle. Now compare this list of grasses and plants with the list of flora at Tonopah and Goldfields as follows:

Lederle Pollen Vaccines.	*Flora of Tonopah and Goldfield.*
Timothy,	Russian thistle,
Red top,	Red orache,
June grass,	Spiny salt bush,
Orchard grass,	Greasewood,
Wheat,	Sagebrush,
Sorrell,	Shad scale,
Dock,	Pigweed or lamb's quarters,
Daisy,	Kochia,
Maize,	Hop sage,
Ragweed,	Desert tea,
Goldenrod.	Salt grass,
	Pigweed,

and note that there is no botanical relationship between them. Nearly the same comparison can be made in other sections of the West.

Should not such commercialism be discouraged and some thought be given to develop a method which has for its main object the good of the patient? A preparation to be of value should be made with some thought of the district where it is to be sold. If not, physicians should realize at the start that no uniform results can be looked for.

The results of the work so far indicate:

1st. The value of a careful botanical survey of hay fever districts and a collection of pollens representing the principal flora of that district.

2nd. The necessity of careful biological tests with extracts of pollens from the principal flora and in some instances the use of atmospheric plates to find the unsuspected offender.

3rd. The necessity of removal of all focal infections wherever found, prior to treatment.

4th. The need of team work—i. e., the cooperation of an internist, neurologist, laboratory technician and laryngologist.

5th. That pollen therapy, to quote Hitchins, holds out promise of greater benefit to hay fever victims than any other method of treatment yet suggested.

6th. That treatment should be commenced at least sixty days before the hay fever season begins and should be continued at intervals during the hay fever period of the patient.

240 Stockton St.

McKenzie, John M.: "The Physiological and Pathological Relation Between the Nose and Sexual Apparatus of Man." Johns Hopkins Bulletin, January, 1898.
Goodale, J. L.: "Studies Regarding Anaphylactic Reactions Occurring in Horse Asthma and Allied Conditions." Transactions Laryngological Association, 1914.
Goodale, J. L.: "Pollen Therapy in Hay Fever." Transactions Laryngological Association, 1915.
Goodale, J. L.: "Diagnosis and Management of Vaso-Motor Disturbances of the Upper Air Passages." Transactions Laryngological Association, 1916.
Chappell, W. F.: "The Effects of Protein Extracts from Fruit and Pollen on the Upper Air Tract." Transactions Laryngological Association, 1915.
Brubaker, J. F.: "The Innervation of the Nasal Chambers." Transactions of the R. L. & O., 1916.
Wilson: "Some Observations on the Treatment of Hay Fever." Transactions of the R. L. & O., 1916.
Grayson, C. P.: "Pathogenesis of Nasal Neuroses." Transactions of the Laryngological Association, 1916.
Fetterolf, G.: "A Case of Vagatonia Apparently Originating in the Nasal Accessory Sinuses." Transactions of the Laryngological Association, 1916.
Oppenheim and Gotlob: "Pollen Therapy in Pollenosis." Medical Record, March, 1916.
Scheppegrell, W.: "Classification of Hay Fever Pollens from a Biological Standpoint." Boston Medical and Surgical Journal, July 12, 1917.
Scheppegrell, W.: "Hay Fever and Its Prevention." Public Health Reports, July 21, 1916.
Scheppegrell, W.: "Hay Fever." Philadelphia Medical Journal, December 9, 1916.
Scheppegrell, W.: "Cause and Prevention." American Medical Association Journal, March 4, 1916.
Scheppegrell, W.: "Its Relation to Seasons, Occupations, Sex." New York Medical Journal, December 9, 1916.
Scheppegrell, W.: "Hay Fever Pollens." Archives of Internal Medicine, June, 1917.
Scheppegrell, W.: "Ragweed Pollen in Nasal Secretions of Hay Fever Cases." Medical Record, October 4, 1916.
Scheppegrell, W.: "Cause, Treatment and Prevention of Hay Fever." Medical Record, July 15, 1916.
Scheppegrell, W.: "Hay Fever in the Southern States." Southern Medical Journal, July, 1916.
Scheppegrell, W.: "Cause and Prevention in Rocky Mountains and Pacific States." Public Health Reports, July 20, 1917.
Hitchens, Parker: "Therapeutics of Hay Fever." New York Medical Journal, October 7, 1916.
Talbot, G. H.: "Asthma in Children and Its Relation to Anaphylaxis." Boston Medical Journal, 1916.
Cook, Robt.: "Treatment of Hay Fever, Active Immunization." Laryngoscope, February, 1916.
Koessler: "Specific Treatment of Hay Fever by Active Immunization." Illinois Medical Journal, August, 1914.
Frazer, J. S.: "Nasal Neuroses, Regarded as Sensitization of Respiratory Tract." Edinburgh Medical Journal, August, 1917.
Oppenheimer & Gottlob: "Active Immunization of Hay Fever." New York Medical Journal, February, 1915.
Wodehouse: "Immuno Chemical Studies of Protein of Cat, Horse and Dog Hair." Journal of Immunology, April, 1917.
Howe: "Anaphylaxis in Respiratory Tract." New York Medical Journal, April 15, 1916.
Wodehouse: "Immuno Chemical Studies of Plant Proteins"; "Immuno Chemical Studies of Proteins." American Journal of Botany, July, 1917.
Wodehouse: "Bacteria, Food, Cat, Dog, Horse Dander." Journal of Immunology," 1916-1917.
Walker, Chandler: "Various Articles Dealing with Asthma, Associated with Proteid Anaphylaxis of Bacterial, Food and Animal Hair Proteids." Appearing in the Journal of Medical Research. Journal of Medical Research, Vol. XXV, 1916-1917.

THE COLLOIDAL GOLD (LANGE) TEST IN DIAGNOSIS. U. C. HOSPITAL.

RICHARD W. HARVEY, M. D., San Francisco.

The readiness with which cerebrospinal fluid is obtained by lumbar puncture has led in recent years to a study of diagnostic methods applied to it. No study of disease of the cerebrospinal nervous system is complete without the valuable evidence derived from the application of the various tests to the cerebrospinal fluid, such as: the Wassermann test, the Noguchi butyric acid test, the Nonne test for globulin, the Fehling's reduction test, and the cell count. In 1912, Lange added to these the colloidal gold test. It is the purpose of this paper to record the application of this test to about one hundred fluids, to show its value as a diagnostic method in diseases of the central nervous system and to emphasize the im-

portance of applying it more generally in the study of our cases.

If to a definite quantity of colloidal gold solution a given quantity of sodium chloride solution be added, particles of colloidal gold slowly precipitate out, leaving a clear solution. Zsigmondy discovered that albuminous bodies prevent this precipitation. If, for example, a definite quantity of colloidal gold solution is placed in a beaker with a given quantity of an electrolyte such as sodium chloride, and a known amount of an albumin added, the colloidal gold solution will remain unchanged; in other words, the albumin has inhibited the precipitating action of the electrolyte on the colloidal solution. Zsigmondy further showed that of each albumin a quantity different from every other albumin is required to prevent the precipitation of the same amount of colloidal gold in a sodium chloride solution. This fact serves to identify the albumin, and it is possible to determine by the gold chloride reaction what albumin is present and in what amount. In the cerebrospinal fluid various albumins are present, and Lange attempted to study them by the application of this method. This is what he found:

A normal cerebrospinal fluid does not precipitate a colloidal gold solution in sodium chloride.

Syphilitic fluids produce a characteristic reaction which is different in paretic cases on the one hand and tabetic and cerebrospinal syphilitic cases on the other.

Fluids from suppurative cases and in brain tumor, hemorrhage, and other non-syphilitic conditions likewise produce characteristic reactions, but different from those in syphilitic fluids.

These facts are of great importance in the diagnosis of cerebrospinal disease. Without the reaction it has been possible by a study of the cells and the Wassermann test to differentiate between specific and non-specific disease of the cerebrospinal system. With the reaction, besides affording substantiating evidence for the interpretation of the other tests, it has become possible to differentiate cases of paresis from cerebrospinal lues and tabes, as well as to distinguish between specific and non-specific central nervous system disease.

In 1913, Sippy and Moody investigated the Lange reaction in the spinal fluid from 268 cases, using the Nonne test for globulin as a control. They strongly advocated its application in cases of cerebrospinal disease. Grulee and Moody at the same time reported nine cases clinically congenital lues and seven suspected cases, and showed that the Lange reaction confirmed cases with clinical signs of congenital syphilis. Lee and Hinton concluded that the test is more delicate than the blood Wassermann, fluid Wassermann, cell count, and globulin, and that it is typical for syphilis of the central nervous system. They believed it possesses an advantage in that it gives a reaction with pathological fluids other than syphilitic fluids; and they considered the margin of error in performing the test small. Weston, Darling and Newcomb found in its application to psychiatry a very valuable adjunct to the prevailing clinical tests. They found that in cases of clinical cerebrospinal lues the fluid Wassermann was always positive and the gold test always positive. In paretic fluids the gold test was always positive. In dementia praecox, manic-depressive insanity, arteriosclerotic dementia, and epilepsy there was no typical reaction. In unclassified psychoses the fluid Wassermann and gold test ran a parallel course. Miller and Levy, and later Miller with several collaborators, have made a careful study of the reaction to determine, if possible, methods of eradicating the inconstancy of the results they found they had been getting. They observed that the gold test may be positive in cases in which all other pathological findings are absent, that it may occur in cases not clinically paresis, that in general paresis the absence of dementia does not argue against the value of the test, and that in congenital lues, except in juvenile paresis, the test should not be relied upon to the exclusion of other laboratory tests. They affirm that it does not replace other tests, but offers very valuable confirmatory evidence. Others in Europe and in this country have investigated the test in its application to spinal fluid. In general it is the opinion that the reaction is of great value in the hands of careful workers; but one and all agree that, while the test itself is simple, the preparation of a satisfactory indicator is extremely difficult and is practically the only bar to a more general application of the colloidal gold reaction.

In preparing the indicator the following reagents are used: a 1% solution of gold chloride; a 2% solution of potassium carbonate; a 1% solution of formalin. The chemicals must be chemically pure and the solutions must be made in distilled water. To prepare half a liter of indicator, 500 c. c. of freshly distilled water are placed in a beaker of Jena glass and slowly heated to 60° C. At this point 5 c. c. of gold chloride solution and 5 c. c. of potassium carbonate solution are quickly added to the water with a sterile pipette and the gas then turned on full until the solution attains a temperature of 95° C. The heat is now removed and 5 c. c. formalin solution added slowly with constant stirring. The solution which has remained colorless until the addition of the formalin now turns pink, then lilac, then light red, and finally deep red with just a glint of orange. The indicator thus formed should be clearly transparent by direct or reflected light. If it is purplish and smoky it is unsatisfactory and the attempt to prepare it should be repeated, there being no possible way of correcting it once the reduction has taken place. Experience has shown that only when the directions for preparing the indicator are implicitly followed may one expect to obtain satisfactory results. The glassware must be cleansed chemically, and the water used must be doubly or even triply distilled with an apparatus free from rubber connections. Such an apparently insignificant substitution as the use of a flask for a beaker in the preparation of the indicator may lead to a failure. If the solution is heated too rapidly failure will likewise result. Instead of formalin, glucose has been used as a reducing agent and Miller reduces with formalin

after the addition of a few drops of oxalic acid; but I have found the original method of Lange to give the best results if it be followed with the utmost care. It is obvious that the successful preparation of the indicator depends on the care of a skillful laboratory worker. Once the indicator is prepared the carrying out of the test is a very simple matter.

Eleven chemically clean tubes are set up and 1 c. c. of .4% sodium chloride added to each. To the first tube is added an additional .8 c. c. of salt solution and .2 c. c. of the spinal fluid to be tested. One c. c. is now removed from the first tube and placed in the second. By the successive removal of 1 c. c. from each tube to the next, dilutions of the fluid are prepared in geometrical progression from 1:10, 1:20, 1:40, etc., to 1:5120. The eleventh tube, containing only salt solution, is used as a control. To each tube is now added 5 c. c. of the indicator, and the tubes are set aside for eighteen hours.

The changes which take place in the tubes are most interesting. The reaction, we must remember, depends upon the prevention by the albumin in the spinal fluid of the precipitation of the colloidal gold in the presence of the electrolyte, sodium chloride. In the absence of these proteins precipitation takes place in varying amounts, depending on the dilution, so that the indicator assumes different colors in the different dilutions, by the clumping together of the small colloidal particles. The color changes vary from deep red to red-blue, to lilac or purple, to blue, to cloudy, to complete precipitation resulting in a clear tube. For convenience of expression in reporting the results of a test the changes are numbered from 0 to 5, 0 being the normal color of the indicator and 5 clear.

Having described with all possible brevity the preparation of the indicator and the performance of the test, let us study its application to about 100 fluids obtained in the examination of patients in the wards and Neurological Clinic of the University of California Hospital. To these cases are added a few obtained from private sources.

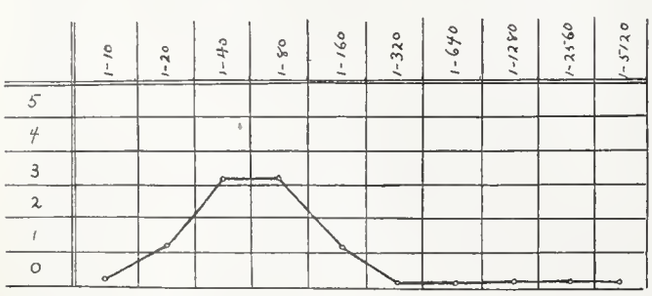


Chart I — Luetic Curve.

Chart I represents a typical curve constructed with the abscissae representing the different dilutions, and the ordinates the varying color changes. The apex is attained at dilutions 1:40 and 1:80 with a color change to blue. At the dilutions 1:320 the curve becomes coincident with the base line. This is a typical "luetic curve," found in cases of tabes, cerebrospinal lues, and congenital lues.

A normal fluid would be expressed by a straight line through all dilutions coincident with the base-line, there being no clumping of colloidal gold in the normal case.

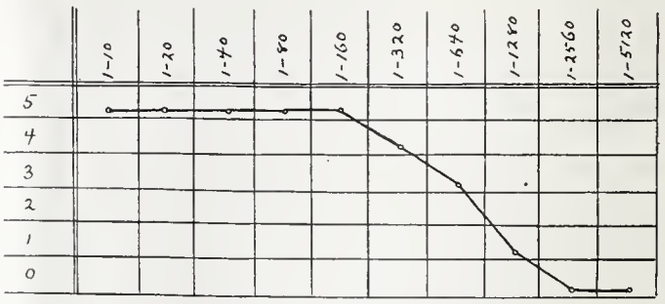


Chart II - Paretic Curve.

Chart II represents a typical curve obtained in a case of general paresis. Complete precipitation occurs in the low dilutions to a dilution of 1:160. In the higher dilutions varying degrees of inhibition result in successive color changes until the color of the indicator is reached at a dilution 1:2560. Comparing Charts I and II we see at a glance the possibilities of the test in differentiating the two conditions of which they are the graphical representations.

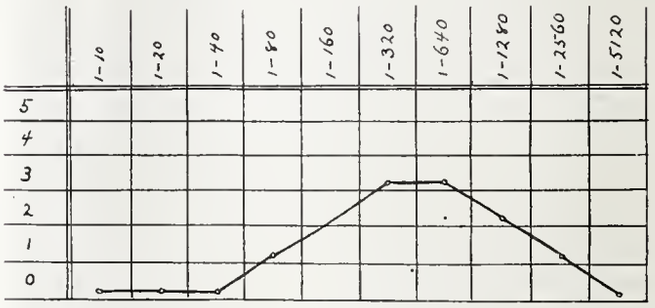


Chart III - Non-luetic Curve.

Chart III is a curve resulting in a case of non-syphilitic disease of the central nervous system. The apex is attained in the higher dilutions 1:320 and 1:640. Such a curve would be typical, for example, of tubercular meningitis.

An analysis of each of the cases studied would be very instructive, but for conciseness the records have been grouped so as to show the conformity of the color changes in each group with the type of reaction. The blood test and spinal fluid findings are likewise grouped so as to show a parallel with the colloidal gold reaction.

Table I shows the gold chloride dilutions giving the strongest precipitation in the different groups of cases, together with the average cell count for each group, the number of positive and negative Nonne and Noguchi tests, and the number of positive and negative blood and fluid Wassermann tests.

Summary. Table II. In seven cases which were clinically general paresis every case showed a paretic curve in the colloidal gold test, while only five gave the globulin and Wassermann tests positive throughout. The value of the Lange in diagnosis as shown in this group is further illustrated in the case of juvenile paresis. This case, clinically a congenital lues, with few neurological signs and no mental changes, has been observed in hospital over a period of several weeks during which time intensive treatment has been adminis-

TABLE I.

Diagnosis	No. of Cases	Strongest Color Change	Cells per 1 c.m.m.	Noguchi +	Noguchi −	Nonne +	Nonne −	Wassermann Blood +	Wassermann Blood −	Wassermann Fluid +	Wassermann Fluid −
General Paresis	7	1:10-1:640	Av. 45	6	1	5	2	5	2	5	2
Tabes	9	1:80-1:320	Av. 17	4	5	6	3	3	6	5	4
C. S. Lues	22	1:80-1:320	Av. 56	17	5	18	4	12	10	14	8
Syph. Meningitis	2	1:80-1:640	Av. 425	2		2		2		2	
Congenital Lues	3	0	Av. 3		3	1	2	3			3
Juvenile Paresis	1	1:10-1:640	Av. 16	1			1	1		1	
Latent Syphilis	1	1:80	1	1		1			1		1
Epilepsy	3	0	Av. 4	1	2	1	2		3		3
Malignant Lues	1	0	8		1		1	1			1
Secondary Lues	9	0	Av. 5	5	4	3	6	5	4	2	7
Paralysis Agitans	1	0	2		1		1		1		1
Typhoid	1	0	0		1		1		1		1
Malaria	1	1:160	7		1		1		1		1
Delirium Tremens	1	0	2		1		1		1		1
Dementia Praecox	1	0	8		1	1			1		1
Miscellaneous	16	0	Av. 6	5	11	6	10		16		16

TABLE II.

Diagnosis	No. of Cases	Positive Colloidal Gold	Positive Blood Wassermann	Positive Fluid Wassermann
General Paresis	7	7	5	5
Juvenile Paresis	1	1	1	1
Tabes	9	8	3	5
C. S. Lues	22	16	10	14
Congenital Lues	3	Negative 3	3	Negative 3
Miscellaneous	43	Negative 43	Negative 43	Negative 43
Secondary Lues	9	Negative 9	5	2

tered. The spinal fluid has been examined six times. Each examination shows a diminished cell count and a diminution in globulin and in the positive blood Wassermann; but the fluid Wassermann remains double positive in a dilution of 0.5 and the colloidal gold test is practically unchanged from what it was in the beginning. That the case is progressing in spite of treatment is evident from the pupillary changes. In prognosis, therefore, the test assists us definitely and is to be given incomparably more weight than a study of the successive cell counts and globulin reactions. Another case, clinically cerebral lues, with positive cerebrospinal fluid findings, showed a colloidal gold test giving a paretic curve. Several weeks later mental symptoms, such as loss of memory and depression, have begun to appear and we feel justified in anticipating the development of paresis. Another case gives an almost identical course, with a positive paretic curve.

In nine cases which were clinically tabes every case but one gave a luetic curve in the colloidal gold test. In contrast with this result, only about one-half gave positive specific findings in the blood and fluid examinations. The one case which did not show a luetic curve had received Swift-Ellis intraspinal treatment, KI, and mercury over a period of more than a year.

In 22 cases of cerebrospinal lues 16 showed a luetic curve while the Nonne globulin test was positive in 18, the blood Wassermann positive in 10, and the fluid Wassermann in 14. The luetic curve, therefore, is confirmatory of other fluid findings in most cases of tabes and cerebrospinal syphilis and is positive oftener than the other spinal fluid tests.

In three cases of congenital lues without neurological symptoms and signs, the colloidal gold test was negative and parallel with the other spinal fluid findings.

In 23 cases with negative spinal fluid tests the colloidal gold reaction was likewise negative.

In nine cases with secondary syphilis, five showed increased globulin and two a positive Wassermann in the fluid, but the colloidal gold test was negative in all.

In one case diagnosed latent syphilis the spinal fluid findings were negative except for a positive Noguchi and a positive colloidal gold test.

Other miscellaneous cases to the number of about twenty were negative throughout.

Several fluids examined from cases of cerebral hemorrhage occurring months previously showed no characteristic gold curve. No case of tubercular or epidemic meningitis or of brain tumor is included in the series, but the testimony of others is strongly in advocacy of the colloidal gold test in these conditions.

Conclusions. Observations on this series support the opinion of previous workers, that while the colloidal gold test is valuable, it does not replace other tests but confirms them and in some instances assists in a prognosis. The test is valueless unless a satisfactory indicator is prepared. It is simple of execution, and the error is small if the precaution be observed of obtaining blood-free spinal fluid in clean, sterile tubes. In congenital lues the reaction does not add to the evidence given by other spinal fluid tests but it is of confirmatory value. In tabes the test, besides confirming evidence from other sources, may, when it gives a paretic curve, predict the development of a paresis. In tabes and cerebrospinal lues it may be positive in cases in which the Wassermann, cell count, and globulin are negative. In general paresis it is invariably positive and is of absolute value in differentiating between general paresis on the one hand and tabes and cerebrospinal lues on the other. In normal fluids it is invariably negative, if Miller's rule of counting all color changes below 2 as negative be followed. Where the laboratory facilities are such that care and time may be devoted to the preparation of a suitable indicator the test should be performed on every spinal fluid; the data for diagnosis is incomplete otherwise. In these days of scientific methods in medicine, when we are aiming at precision in diagnosis, I wish to advocate strongly this test,

at once simple and precise, in aiding in correct diagnosis and prognosis.

Bibliography.

Zsigmondy: Zeitsch. f. Chemotherapie, 1912, i, 44.
Lange: Berl. klin. Wochenschr., 1912, xlix, 897.
Sippy and Moody: Trans. Assn. Am. Phys., 1913, xxviii, 720.
Grulee and Moody: Jour. Amer. Med. Assn., July, 1913, 13.
Lee and Hinton: Amer. Jour. Med. Sci., 1914, cxlviii, 33.
Weston, Darling and Newcomb: Amer. Jour. Insan., 1915, lxxi, 773.
Miller and Levy: Bull. Johns Hop. Hosp., 1914, xxv, 133.
Miller and Brush: Bull. Johns Hop. Hosp., 1915, xxvi, 391.

Discussion.

Dr. E. A. Victors: There have been a number of objections to the colloidal gold reaction on account of the difficulty of preparing a proper reagent and that gold is one of the most unstable of colloids. In certain of the larger institutions where the reaction can be properly controlled and where fluids can be properly taken, it is a test of much value. The fluid should be taken with a properly prepared platinum needle and must be absolutely free from blood. I do not advise the colloidal Lange test as an ordinary laboratory procedure. Its quantitative or diagnostic factors are of importance although at times differentiation between tubercular meningitis and specific cerebrospinal disease can not be made.

Recently Emmanuel has suggested a colloidal mastic test. This is a far more stable colloid and exceedingly simple to prepare and the errors that creep into the gold test do not exist here. I am presenting at a coming meeting several hundred of these tests. The parallel between the mastic asd Wassermann reaction is remarkably striking and it seems every bit as delicate as the colloidal gold, although not as differential.

Dr. Hans Lisser: I think Dr. Harvey's paper deserves considerable discussion, for the conclusions are well worth while. A diagnosis of paresis involves a prognosis so portentous that any test which will permit of our recognizing this disorder earlier than we can do so clinically, while there may still be a possibility of intensive prophylactic treatment, is exceedingly valuable. Whether the Lange test will accomplish this much desired result remains to be seen; but in any case we should be very sure that the reaction is done by competent hands.

Dr. Harvey mentioned one case that interested us very much—probably a case of juvenile paresis. A boy, seven years old, came to the children's department of Dr. Lucas, at the University of California Hospital, and a Wassermann in the blood was done because he had markedly unequal pupils. One pupil was very much dilated and did not react to light at all. The other pupil reacted to light when we first saw him, not very actively, but definitely. The Wassermann in the blood was XX, on the basis of XXX being strongly positive. His spinal fluid showed 54 cells, positive Nonne, questionable Noguchi and XXX positive Wassermann in .2 cc.

Here was a patient with an excellent mentality of seven years plus; emotionally normal, showing no psychic evidences of paresis. Moreover, the neurological examination showed no signs of involvement, except for the eye findings just mentioned. The Lange gold test, however, gave a marked reaction in the paretic zone. I might add too, making the case still more peculiar, that this boy showed no evidence of optic atrophy, which is so frequently present in juvenile paresis.

We began to treat him with intravenous salvarsan, iodides and mercurial inunctions, in order to observe what results could be obtained before resorting to intraspinous therapy. Parenthetically it may be remarked, that had we given intraspinous therapy at once, the changes that occurred would have been ascribed to the "wonders" of intradural treatment, though in this case these questionable "wonders" were accomplished by more simple methods. This seven-year-old boy received, first—.45 Neosalvarsan, then .6; then .9; the full adult dose. Since that time he has had four more full doses of .9 neosalvarsan. We are not recommending such enormous doses, but it is interesting to place them on record. He vomited somewhat after the larger doses, but hardly more so than many adults.

Now for the results—the cells in the spinal fluid decreased from 54 to 3, Nonne and Noguchi disappeared, the Wassermann became negative in .2, questionable in .3 cc. His mentality remains normal. The pupil which was fairly active in the beginning is now barely reacting to light. Throughout all this treatment the colloidal gold curve remained strongly paretic.

Accordingly on the basis of one laboratory test alone, we are making a diagnosis of juvenile paresis, even though there are no clinical signs to substantiate it. It will be interesting to see what happens to this boy in the next two or three years.

Dr. H. G. Mehrtens: Dr. Harvey did not mention one of the things that arise as a confusing factor in the Lange test. If a patient has had previous intradural treatment, that has an effect on the fluid as far as the Lange test is concerned. In the neurological clinic at Stanford we followed this rather carefully and found some very odd results. In certain cases the Lange test is reduced steadily, finally becoming negative in the last of the reactions. But frequently, especially in paresis, the Lange test does not become negative, but becomes confused, takes on odd and atypical forms, so that if the patient should arrive and should not disclose the history of former treatment, and a lumbar puncture were done, the test would be of little or no significance. We had a case in point, in which the patient intentionally withheld the information of previous intradural treatment. The signs were perfectly evident, and a diagnosis of probable paresis was made. The Lange came back with a very atypical form, so much so it was not even typical for tabes, cerebrospinal syphilis or meningitis. Later on the patient volunteered the information that intradural treatments by both the Byrnes and Swift Ellis methods had been given, explaining the peculiar form of the Lange test.

Dr. Harvey, closing discussion: The observation of Dr. Mehrtens is certainly interesting. We had occasion to notice one case of tabes that had received several treatments of Swift-Ellis, and in which the Lange test was negative.

Dr. Lisser did not mention that in the case of general paresis, the mastic test was positive, corroborating the colloidal gold. We have been using the mastic test for some months at the University and are glad to know that a report on it will be made here.

WHY OPTICIANS OR OPTOMETRISTS OUGHT TO HAVE MEDICAL DEGREE.

(a) A general knowledge of the entire human body is necessary for the intelligent treatment of eye diseases.

(b) The majority of eye diseases are not to be cured by the mere fitting of glasses.

(c) Systematic and medical treatment is required in 70 to 90 per cent. of all eye diseases.

(d) Many diseases have their first or most diagnostic signs appear in the eye.—Bull. of Fed. of State Med. Bds., Feb., 1918.

PERMANGANATE REDUCTION INDEX OF CEREBROSPINAL FLUID.

By ERNST ALBRECHT VICTORS, M. D., San Francisco.

Mayerhofer [1] has applied an old oxygen consumed water test used as an index of contained organic matter to determine variations in the organic elements of cerebrospinal fluid in normal and pathological conditions. The number of c. c. of a decinormal potassium permanganate solution when boiled for ten minutes in a strong sulphuric acid solution, that is reduced by 1 c. c. of spinal fluid, is determined the Permanganate reduction index.

The field for the application of the reduction index appears to be limited to young children evidencing symptoms of meningeal irritation, and is of differential aid in determining a true involvement of the meninges and diseases other than meningitis but which appear meningeal. The inconstancy of cytologic findings and the difficulty of demonstrating causative micro-organisms in these borderline conditions, gives to this test a certain sphere of usefulness.

The reduction index is usually below 2 with normal fluids and the upper limit of normal fluids as determined by Mayerhofer is 2.3 and by Hoffman and Schwartz [2] as 2.5. In tuberculous meningitis is there a constantly high index, especially in the last portion of the fluid. In serous meningitis, on the other hand, the index is relatively lower and higher in the first portion. Hoffman and Schwartz report an index of from 2.5 to 5.7 in tuberculous meningitis, rarely above 2.4 in serous meningitis, usually above 3 in epidemic meningitis and between 2.5 and 3.3 in polyomyelitis in the acute stage. These authors also report a case of tumor of the cerebellum with the clinical picture of tuberculous meningitis in which the index was persistently below 2.

I am here presenting a small series of fluids in which the Permanganate reduction index was determined.

PERMANGANATE REDUCTION INDEX.

Case		Diagnosis	Index
49557		Ep. Cerebrospinal Meningitis	3.5
49604		Tuberculous Meningitis	4.2
49763		Tuberculous Meningitis	2.4
51193		Tuberculous Meningitis	6.1
50836		Brain Tumor	1.0
51285		Tetanus	2.7
27827	(SQ)	Tabes	2.5
19	(Ag)	Paresis	1.1
29078	(SQ)	Surgical—Spinal Anesthesia	0.6
25258	(SQ)	Surgical—Spinal Anesthesia	2.4
23703	(SQ)	Surgical—Spinal Anesthesia	1.6
51115		Convulsions (?)	0.9

1. Mayerhofer—Wiener klin. Wochenschrift. 1910, XXIII, No. 18, pp. 651.
2. Hoffman and Schwartz. Arch. Int. Med. 1916, Vol. 17, No. 2, p. 293.

OBSTETRICAL ANESTHESIA.*

By CAROLINE B. PALMER, M. D., Lane Hospital, San Francisco.

The intention in the present paper is to consider various means of controlling the suffering incident to childbirth without restriction to the subject of true anesthesia.

That the degree of shock caused by inadequate relief of pain during labor may have far-reaching consequences has been abundantly proved. Edgar says: "Possibly the majority of the highly civilized class of women are physically and mentally unfit to suffer an approach to spontaneous labor. Unless guarded from too much suffering women of this class experience a profound physical and psychic shock in their first confinement, from which some never fully recover." [2]

Hellman, in the American Journal of Surgery, says: "Labor if normal is physiological, but the suffering has always been considered something to be avoided as far as is commensurate with safety, and the need of this in practice is increasing with each generation. The fetal head is a trifle larger, the female pelvis a trifle smaller, and the mother's nervous system much less able to withstand the shock of labor." [1]

Since the time of Sir James Simpson, the best obstetricians have employed various anesthetics to relieve the suffering of labor, but until comparatively recent times little has been accomplished to safeguard the patient during the *first* stage, as early use of the anesthetics ordinarily employed, viz.: chloroform and ether, retards labor and their prolonged use is fraught with danger to both mother and child.

From the earliest times the question of therapeutic measures for the relief of pain has been hampered by superstitions and prejudices. Now we have shaken off some of the superstitions but the prejudices it is to be feared are still with us.

At present we are reaping the benefits of the research which has been stimulated by the recent agitation over the subject of "painless childbirth," and the final outcome will probably be to place the entire matter upon a solid foundation based upon the immediate and remote effects of the various drugs employed. When this time has actually arrived, we shall at least have the satisfaction of knowing whether or not our measures for the relief of pain do more or less harm than the pain itself.

Each therapeutic measure for the relief of suffering has been hailed as absolutely safe until a series of catastrophies has proved the contrary. Harm has resulted from the over-enthusiasm of the advocates of each measure and in many instances from the influence of commercial interests.

Most of us probably feel that notwithstanding the large amount of valuable work which has been done recently, we are still far from certain that we know the best means of controlling pain in the various phases of labor.

Narcotics and Antispasmodics.—Many authorities now agree in the use of some form of opium

* Read before the Forty-sixth annual meeting of the Medical Society, State of California, Coronado, April, 1917.

and antispasmodics when necessary to relieve suffering in the first stage, the difference of opinion being mainly as to dosage, combinations of drugs and the length of time before expected delivery. It is generally recognized that the use of drugs which depress the respiratory centres is dangerous to the fetus unless given early enough to be practically eliminated before delivery takes place; also that the use of two or more drugs which are synergistic in action constitutes a much greater danger than the sum of the action of the drugs employed.

That the danger to the fetus is real when respiratory depressants are given so late in labor that their influence overlaps the expulsive stage has been shown experimentally as well as clinically.

Professor Jung reports: "The fact that many drugs are transferred in part from mother to child cannot be denied. Some of these, such as morphine, scopolamin, chloral hydrate, sodium bromide, chloroform, ether, and many others, have been shown to be carried over. The proportion of the drug usually found in the fetal circulation is small compared to the amount ingested by the mother, due to the fact that most drugs are rapidly eliminated from the maternal circulation.

The question as to whether or not a child can be killed by drugs administered to the mother must be answered in the affirmative. Efforts to give a painless labor by the use of ether, chloroform, etc., give proof of this. It is true that in many cases large doses of these drugs have been used and that nevertheless normal children have been born. But it is also true that in many instances mortality of the child has resulted in such a way that the drug must be held responsible.[3]

CHLOROFORM, ETHER, NITROUS OXID-OXYGEN.

The use of chloroform or ether to an extent sufficient to have any appreciable effect upon pain is likely to decrease the strength of uterine contractions, and to decrease or abolish the aid of the accessory muscles of expulsion and therefore increase the duration of labor.

I have on several occasions induced and maintained for a varying length of time a true analgesia with ether in which the patient was conscious but felt no pain. Each time however labor has been more or less delayed and in two recent cases the contractions were entirely stopped and did not recommence after the withdrawal of the ether for 20 minutes in the first case, and 25 minutes in the second. In both of these cases after the period of delay, nitrous oxid with 15% of air was administered as soon as the woman began to show indications of suffering. In both cases the uterine contractions were apparently stimulated and labor went on to a satisfactory conclusion. How much the period of rest following the ether had to do with renewed strength of the labor pains, it would be difficult to say, but at all events the use of N_2O did not decrease the strength of uterine contractions or the voluntary assistance of the patients.

The proper use of morphine and scopolamin probably does not delay the first stage of labor, but all authorities seem to agree that they increase the duration of the second stage. The chief danger of morphine and scopolamin lies in the fact that both drugs are respiratory depressants. It seems probable, however, that the reaction against "Twilight Sleep" is carrying us too far and that we are likely to lose sight of much that may be of value in the antagonism engendered by the too ardent advocates of the method.

The use of morphine alone delays labor when given too early or when given in cases of uterine inertia. On the other hand, it may actually expedite labor by conserving the patient's strength and through its aid in relaxing a rigid cervix. Chloral hydrate also assists in the dilatation of the cervix and in giving rest to the patient. It should be remembered, however, that it causes a decided direct depression of the respiratory centres and its property of lowering blood pressure may constitute at times a danger to the fetus.[9]

For the past few months in the Division of Obstetrics and Gynecology of the Stanford University Medical School, nitrous oxid-oxygen has been administered to all patients in labor who could pay a given sum for the gas and for those who for any reason presented contraindication to the use of ether, whether they could pay for the gas or not.

In our earlier cases in the use of nitrous oxid-oxygen analgesia, we had the same experience which has been reported by many others, in that we frequently carried the patients past the stage of analgesia into that of light anesthesia, so losing the advantage of the patients' voluntary assistance. With greater experience and better co-operation between the obstetrical and anesthetic departments, we believe that the sceond stage of labor will be definitely shortened, although our tabulated results do not show this, as do those reported by many other observers. However, our tables include the earlier cases before mentioned together with the cases of assistants who were receiving instructions in this form of nitrous oxid-oxygen administration.

Interference.—The part which narcotics and anesthetics play in the necessity for interference in order to conclude labor depends upon whether or not they decrease the strength of uterine contractions and the patient's ability to use the accessory muscles of expulsion. It has been shown by many observers that morphine, scopolamin, chloral hydrate, chloroform, and ether all delay labor to a greater or less extent, depending upon the judgment with which the dose is regulated and the time given. Nitrous oxid-oxygen, on the other hand, certainly does not delay labor in the second stage and may be given in such a way as to shorten the duration of this stage. It therefore seems reasonable to expect that interference would be indicated with less frequency when nitrous oxid-oxygen is used. The statistics seem to prove this to be true. When forceps are indicated continuous N_2O,O analgesia or a moderate degree of anesthesia is eminently satisfactory with possibly the addition of a very small amount of

ether at the perineal stage to secure relaxation. In this connection I. wish to protest against the use of profound gas oxygen anesthesia for any purpose before or during the delivery of the child. According to Connell's tabulation of the zones of anesthesia under N_2O,O, any decrease of oxygen below 14% is impossible without some trace of asphyxia.[5] The addition of an extremely small quantity of ether will produce the necessary relaxation without danger while any degree of asphyxia contined for more than a very brief interval cannot be without danger to the fetus.

The addition of a small quantity of ether, without any diminution or even a slight increase in the percentage of oxygen, is a relatively harmless procedure while the attempt to secure relaxation by decreasing the amount of oxygen beyond certain limits is always dangerous and especially so in obstetrics.

When version or any other procedure requiring relaxation is indicated, N_2O,O-ether or ether-oxygen is unquestionably the safest for the fetus and probably for the mother as well.

Hemorrhage.—Postpartum hemorrhage is believed by many to be relatively less frequent after gas than after the use of ether or chloroform as the normal tone of either voluntary or involuntary muscle is not lost under N_2O, O.

Lacerations.—Davis, Lynch, Allen and others state that in their experience the frequency of laceration is noticeably diminished by the use of nitrous oxid-oxygen because of the better control over the patient owing to the fact that she is conscious and can bear down or not just as the obstetrician may desire. However, the greater strength of uterine contractions under N_2O, O would certainly suggest the possibility of an increased number of lacerations. This, and the fact that the patient while fully conscious is usually not making any outcry, make it necessary for the obstetrician to be extremely alert or the greater potential control of the patient will not prevent an increase in the number of lacerations.

Several instances illustrating this have been reported in which the patient under nitrous oxid-oxygen analgesia simply gave birth to her child without the benefit of the obstetrician's services at the important moment.

Prolonged Labor.—Another danger arising from the fact that the patient under N_2O,O analgesia gives so little oral evidence of the progress of labor is that labor may be allowed in some cases to be prolonged beyond the point of safety to the child, i. e., where the obstetrician may fail to recognize the need of interference when he would certainly do so were the woman showing the evidence of pain. I realize my temerity in making this last statemest to a gathering of this kind, but a few such cases have already been reported.

Minor Operations.—Most minor operations before the birth of the child can usually be performed under continuous N_2O,O analgesia.

Eclampsia.—In eclampsia chloroform is still, it seems, the most. commonly used anesthetic. The reasons are obvious, as chloroform more readily produces sufficient relaxation to control the convulsions. At the same time it should be remembered that chloroform while the most powerful of the anesthetics in common use is at the same time the most toxic, which it would seem should be sufficient reason for avoiding its use in toxemias. Edgar says: "In the majority of cases of eclampsia, in which we feel sure of the existence of the pregnancy kidney, it is stated that hepatic lesions are almost invariably present." As we know chloroform even in moderate doses may cause liver necrosis among other tissue changes. Recently a case came under my observation in which the administration of chloroform for 20 minutes was followed by marked symptoms of chloroform poisoning. Graham says: "Ether and chloral hydrate which do not yield halogen acid in their breakdown in the body likewise do not produce necrosis. They induce only edema and fat infiltration to a less marked degree."[7]

Douglas H. Morse states: "N_2O,O has most of the advantages and none of the dangers of the hydrocarbon anesthetics. Thus it is non-irritating, non-lipoid, solvent, is only slightly toxic and does not attack the liver or renal cells."[10] "Dr. Crile is convinced that N_2O is superior to the hydrocarbon anesthetics because it is not a lipoid solvent, and *protects the reserve supply of molecular oxygen in the neurones.*"[10] However, in practice we find that N_2O,O will not always control the convulsions of eclampsia and will not give sufficient relaxation for operative procedure after the convulsions have actually begun. In such cases N_2O,O-ether or ether-oxygen would seem to be indicated. In cases of profound toxemia, however, or threatened eclampsia, N_2O,O gives ideal results.

Dr. J. C. Webster of Chicago was probably the first in this country to demonstrate the use of nitrous oxid-oxygen anesthesia in operative obstetrics with particular reference to cases in which other anesthetics were contraindicated.

Others have been quick to take advantage of his experience and it is rapidly becoming the custom to give patients who are toxic or especially bad risks for any reason the benefit of this comparatively safe form of anesthesia.

Four cases from among others in the service of Dr. Spalding serve to illustrate the benefit of a non-toxic anesthetic in this type of patients.

Case 1. Mrs. O. Pregnancy 8 months 10 days. Pre-eclamptic toxemia. Operation—low forceps. Nitrous oxid-oxygen anesthesia with the addition of small amount of ether to secure relaxation. Condition of baby good. Spontaneous respiration. Patient made satisfactory recovery.

Case 2. Mrs. R. Full term pregnancy. Toxemia with threatened eclampsia. History of eclampsia in last pregnancy with loss of baby. Operation—low forceps. Nitrous oxid-oxygen continuous analgesia followed by nitrous oxid-oxygen anasthesia. Condition of baby good. Spontaneous respiraiton. Mother made useventful recovery.

Case 3. Mrs. M. Pregnancy 5 months. Extreme toxemia. Diagnosis of dead fetus. Operation—vaginal Caesarian section. Nitrous oxid-oxygen anesthesia with the addition of ether

(½ oz.) for relaxation. Patient made uneventful recovery.

Case 4. Mrs. E. Pregnancy 5 months. Extreme toxemia of pregnancy with complications. Operation—Hysterotomy, version and breech extraction. Baby lived 1½ hours. Patient made satisfactory recovery.

In the last of these cases, at least, it is extremely doubtful if recovery could have taken place had a toxic anesthetic been employed. The condition of the patient was so serious that when called to administer the anesthetic I scarcely expected a satisfactory result.

Caesarian Section.—In Caesarian section nitrous oxid-oxygen anesthesia with anoci association gives ideal results, but nitrous oxid-oxygen with the addition of a small amount of ether to secure a certain degree of relaxation until after the child is delivered is probably more satisfactory to the majority of surgeons as it allows this portion of the operation to be performed so much more rapidly. When everything is ready for the actual incision before the anesthetic is started, it is possible for a skilled operator to deliver the baby so soon after the induction of anesthesia that the child shows no effects of the anesthetic. It seems to be entirely safe to permit the incision as soon as the patient is in good primary anesthesia. Under these conditions the babies usually cry spontaneously often while the cord is being clamped and cut. We have had this result in a relatively large number of cases both under nitrous oxid-oxygen ether anesthesia and ether-oxygen anesthesia. After delivery the remainder of the operation can usually be completed under nitrous oxid-oxygen alone as the reason for giving so large a percentage of oxygen ceases with the clamping of the cord.

TECHNIC OF NITROUS OXID-OXYGEN ANALGESIA AND ANESTHESIA IN NORMAL OBSTETRICS.

The technic of N_2O,O analgesia in normal obstetrical practice is now fairly uniform. It consists of the administration of N_2O with varying percentages of oxygen for each individual pain to a degree sufficient to abolish suffering without disturbing consciousness, until the perineal stage is reached, when continuous analgesia is usually indicated. The gas is given at the first suggestion of the uterine contractions so that the analgesia may precede the pain. The amount of gas required and the percentage of oxygen varies considerably with the individual patient, the point being to give just sufficient gas to control the pain with enough oxygen to prevent cyanosis. Too much oxygen will produce excitement, too much gas will induce anesthesia. A frequent method is to give three breaths at the beginning of each contraction, the first two being N_2O only and the third containing 4 to 6% of oxygen. The respirations should be fairly quick and the patient instructed to hold the third breath for a considerable time whether it is desired to have her make voluntary muscular effort or not. The number of respirations sometimes must be increased to 5 or 6, but whatever the number the last breath should be held. Occasionally less than three breaths will be sufficient. Recently I had a patient who was completely anesthetized after three breaths, became wildly excited after two and had analgesia after one. I therefore continued her analgesia with one inhalation at the beginning of each pain until the pains, becoming more frequent and severe, two breaths were required, then three, and for the perineal stage she had continuous analgesia with 80% N_2O and 20% oxygen. Whatever the number of breaths required, it is a safe practice to add a small amount of oxygen after the first two or three. As the pains become longer it is well to hold the inhaler in such a way that additional breaths of gas may be given if necessary. For these later inhalations most observers agree in the use of a larger percentage of oxygen. It is our custom to use the same percentage here as for continuous analgesia, i. e., N_2O 80%, oxygen 20%. As soon as the head is delivered, it is well to increase the oxygen to 30 or 40% and immediately after the child is born to give the mother a few inhalations of pure oxygen. Pure oxygen cannot be breathed with safety for more than a brief interval, but we have had very gratifying results by the administration to the mother of oxygen from a low pressure cylinder for some five minutes before the cord is cut. The oxygen is simply added to the air by placing in the patient's mouth a metal mouthpiece connected with the wash bottle of the oxygen tank. Should the baby be cyanotic from prolonged pressure, cord around neck, or any other reason, it is interesting to see how quickly the cyanosis will clear up under this procedure. We make a routine practice of administering oxygen in this way regardless of what anesthetic has been used for the delivery.

The success of nitrous oxid-oxygen analgesia depends upon the ability of the anesthetist to adapt the administration to the needs of the individual patient, upon being able to secure the patient's confidence and co-operation, upon the degree of intelligence of the patient, the quietness of the room, particularly the absence of disturbing conversation, and last but by no means least, teamwork between the obstetrician and the anesthetist.

Given a skilled obstetrician, an experienced anesthetist, and proper teamwork, there should be no failures.

I entirely disagree with all who advocate the haphazard administration of nitrous oxid-oxygen by any one who happens to be available, also with those who advocate self-administration except under the direction of a competent person.

Dr. Skeel says in the Journal of the American Medical Association: "I wish to enter a vigorous protest against the advice at present being so freely given that any one may use gas in labor cases with perfect safety. Gas is a powerful therapeutic agent with infinite possibilities for harm at the hands of incompetent or careless users. The statement has been made and is, I believe, accepted that gas in the hands of an expert is a safe anesthetic, but the *most dangerous* anesthetic if given by a novice. Of course this is far too strong a statement to make concerning analgesia.

Even here, however, some knowledge and experience are necessary to secure both safety and satisfaction from its use. The skill necessary for its use in labor can be acquired in a short time, but free use of gas by the absolutely inexperienced will surely lead to tragedies." [8]

The use of N_2O and air instead of N_2O and oxygen has been advocated by many on the ground of economy and the simplicity of apparatus which may be employed.

Guedel calls attention to the fact that "under individual pain administration the babe in utero receives but little N_2O from the mother, no matter how great may be the excess of gas in the mother's blood during the acme of contraction." He adds: "During the period of induction when the gas is entering the blood of the mother, the uterus is contracting so that there is little if any interchange of foetal and maternal blood. The babe lives during the uterine contraction upon well oxygenated placental blood accumulated between pains. The anesthetic is removed at the acme of contraction and as only 10 to 20 seconds are necessary for the removal of the excess N_2O from the blood of the mother, it becomes evident that the blood of the fetus receives but little nitrous oxid at any time. By the time the uterus is relaxed sufficiently to permit an interchange of blood through its walls, the blood of the mother is almost free of nitrous oxid and is again well oxygenated." [4]

The question of rebreathing is of importance because of economy and because it serves to warm the gas. Too much rebreathing however is apt to cause nausea and headache. In our work we have better results without rebreathing for intermittent analgesia, and with only fractional rebreathing for continuous analgesia and anesthesia.

Expense.—The expense of nitrous oxid analgesia is reported by various investigators as all the way from 57 cents to $5.00 an hour. The difference is mainly due to the price of gas in the particular locality from which the report originates, the kind of apparatus used, whether air or pure oxygen is used with the nitrous oxid, and whether or not rebreathing is employed. The gas in the largest cylinders is the least expensive.

By using the large cylinders, an apparatus in which the flow of gas is automatically shut off except when the patient is inhaling, looking carefully after all possible leaks and keeping our apparatus in perfect working order, we have found that even at the comparatively high price of gas on this coast we are able to give gas for obstetrical analgesia and anesthesia at a cost to each patient of $2.50.

In the series of cases since we commenced giving gas to all obstetrical patients who so desired there are 201, of which number 83 had N_2O,O; 19 had N_2O,O followed by ether; 81 had ether and 18 had no anesthetic. These last were mainly patients who entered the hospital a few minutes before delivery. Our records are complete in all respects except for some gaps in the duration of the various stages.

DURATION OF STAGES.

PRIMIPARAE.

	N_2O,O	N_2O,O-E	Ether	Nothing
1.	15′ 17″	25′	16′ 50″	11′ 10″
2.	2′ 12″	1′ 7″	1′ 05″	21″
3.	19″	13″	17″	18″

MULTIPARAE.

	N_2O,O	N_2O,O-E	Ether	Nothing
1.	10′ 52″	10′ 41″	9′ 53″	10′
2.	58″	2′ 31″	51″	27′
3.	′ 17″	12″	18″	17″

LACERATIONS.

PRIMIPARAE.

	N_2O,O	N_2O,O-E	Ether	Nothing
1°	7	2	9	1
2°	19	8	10	2
3°	—	—	—	—

MULTIPARAE.

	N_2O,O	N_2O,O-E	Ether	Nothing
1°	5	0	9	2
2°	6	1	7	2
3°	—	—	—	—

FORCEPS.

PRIMIPARAE.			MULTIPARAE.		
N_2O,O	N_2O,O-E	Ether	N_2O,O	N_2O,O-E	Ether
6	7	5	1	1	2

MORTALITY.

Maternal—none

Fetal: N_2O—6
Ether—6

Of this number under N_2O,O, two were macerated fetuses; 2 forceps deliveries; 1 version and extraction, and 1 congenital endocarditis, died in two days.

Fetal mortality under ether: 1 premature 2 mo.; 1 cerebral hemorrhage (version); 1 syphilis; 1 premature separation of placenta (forceps); 1 asphyxia—breech extraction.

This synopsis proves nothing but if we had a record of 2000 cases instead of 200, we could begin to draw conclusions. Still better, if by some miracle all who do obstetrics would keep and publish from time to time accurate records of every case, we would soon have something definite to guide us in the choice of methods to relieve the suffering of childbirth instead of opinions, prejudices and often misguided enthusiasm.

Bibliography.

1. Hellman—Am. Jour. Surg., 1915, xxix, Anesthesia suppl., 138.
2. Edgar, J. Clifton—Jour. Amer. Med. Assoc., 1916, lxvii, 739.
3. Jung, W. Ph.—Therapeutische Monatshefter, 1914, xxviii, 104.
4. Guedel, A. E.—The American Year-Book of Anesthesia and Analgesia, 1915, vol. 1, 227.
5. McMeehan—The American Year-Book of Anesthesia and Analgesia, 1915, vol. 1, 251.
6. Edgar—Obstetrics, 5th Ed., 1916.
7. Graham—Researches on Late Chloroform Poisoning. Amer. Year Book of Anesthesia and Analgesia, 1915, I, 136.
8. Skeel, A. J.—Jour. Amer. Med. Assoc., 1916, lxvi, 797.
9. Meyer and Gottlieb—Pharmacology, 1914.
10. Morse, H. Douglas—Amer. Jour. of Surgery, 1915, xxix, Anesthesia suppl., 133.

THE J. HENRY BARBAT PRIZE.

Dr. J. Henry Barbat, President of the Society, offers a cash prize of $50.00 for the best paper presented at the meeting at Del Monte in 1918. Papers on original subjects are to have preference. A jury of five members, appointed by the Council, will have final jurisdiction in the distribution of the prize.

REFRACTION IN CHILDREN.

By EVERETT S. McCLELLAND, A. M., M. D., Associate in Clinical Ophthalmology, College of Medical Evangelists, Los Angeles, California.

The author having been a public school teacher and later a college professor before entering the practice of medicine has long regretted that the medical profession and all those interested in education do not take more interest in the optical defects of children, which if not corrected retard the educational progress of about 20 per cent. in our public schools.

The public does not understand the limitations of jewelry store and prescription opticians in their examination of children's eyes. Parents should be warned of the danger of taking their children to so-called "Doctors" or "Eye-sight Specialists" who are found located in shops and stores. The picture of an eye on a window should be recognized as a warning that the inmate of that office is not a physician and is not educated to properly examine or fit the eyes of children even if lawfully permitted to use a mydriatic.

This article is based on the conclusions drawn from the refraction of about 700 school children between the ages of six and twelve.

But little attention has been paid to various theories, preconceived notions and authoritative teachings in order that the final corrections which gave the best vision along with relief from physical and mental symptoms might be the guide in making our impartial deductions.

About 60% of this series was refracted in the Free Public School Dispensary of the City of Los Angeles, largely through the influence of Mrs. Elizabeth McManus and the Parent Teacher Association. To Dr. Margaret Gilliland and Secretary Mrs. Katherine DeWald with whom the author was associated in the work, and to Dr. R. A. Harris, in charge of the department, and to Dr. I. R. Bancroft, head of the public school clinic, the author wishes to acknowledge credit for valuable cooperation.

This series included representatives of almost every nationality and was in no way selected, except with reference to age. The rules established are not to be considered invariable, for even the nationality and complexion presented a few exceptions to the general deductions.

The article deals largely with hyperopia and its correction because this is the prevailing optical defect in children which acts as a source of focal irritation both locally and reflexly through the sympathetic system.

Hyperopia, we remember, is a condition of the eye in which, when accommodation is suspended, parallel rays of light are focused back of the retina and not on the retina as in the emmetropic or normal eye. Hyperopia, or "farsightedness," must therefore be corrected by convex or plus lenses, while myopia, or "nearsightedness," must be corrected by concave or minus lenses.

The normal and hyperopic eye have power to adjust themselves from a distant to a near object, and vice versa. This power is called accommodation and is one which the myopic eye does not possess unless the nearsightedness is of a very low degree.

Accommodation is a normal process up to a certain limit. This limit is called the near point or about thirteen inches from the eye, and is generally considered the easy reading distance for the normal eye. Accommodation for this distance requires only a reasonable and physiological contraction of the circular ciliary muscles. Normally this effort of the ciliary muscles does not appear to cause any disturbance although made almost constantly for from ten to twelve hours daily, but, in the hyperopic eye, this act of accommodation taxes the ciliary muscles beyond the limit of endurance. This excessive contraction manifests itself by fatigue or, more commonly, by ciliary muscular spasms in the child. The objective evidence of these spasms is temporary nearsightedness or a variable number of local or reflex irritations to be considered later and which may be found in any form of hyperopia, whether simple or associated with astigmatism.

The myopic eye is not associated with reflex ocular symptoms because it can make no active effort to see. It can not accommodate. It must always remain passive. Its ciliary muscles are always relaxed. Even myopes with marked astigmatism seldom give any history of pain in their eyes or of any other reflex nervous symptoms. Myopes usually come or are referred for refraction only on account of defective vision of which they have become conscious only after being told or after having compared their vision with others. After being corrected it is not uncommon to hear a myope make some such remark as, "Why I never knew that there was anything wrong with my eyes," or, "I always thought that everything was covered with fuzz or hair."

With these points in mind we should not be surprised to find that 95% of this series of cases with optical defects were hyperopia and that 98% of all those suffering with optical defects were hyperopic.

No patient, who did not require a plus in his correction, ever gave any symptoms of reflex irritation which could be attributed to optical defects. The more plus required in the correcting formula the greater the evidence of reflex irritation. Symptoms associated with compound formula in which a minus was involved could be accounted for by the plus in the formula. Not over one-tenth of one per cent. of myopes ever complained of their eyes, except so far as they realized that they did not have normal vision, and those who did, had large pupils and usually were blonds suffering from too much light, or had been overcorrected with concave glasses and made artificially hyperopic.

HISTORY OF THE REFLEX IRRITATION.

A history of the child's trouble, furnished by the mother was always found to be important. Marked Compound Hyperopic Astigmatism in which the required correction was over one diopter in both the sphere and cylinder was the defect which seemed to produce the most severe symptoms, although not the most common ones. Defective vision was always characteristic of this defect. The local irritation, such as follicular conjunctivitis, styes or swollen lids, was no more common with this defect than with lesser defects of hyperopia. Morning nausea and vomiting or periodic vomiting seemed to be characteristic. The subject was commonly languid and irritable in the morning and was not disposed to rise with the rest of the family. Very few were in school or expressed any desire to attend.

Hyperopia, simple or compound, in which the

correcting formula was represented by a plus sphere or cylinder of less than one diopter but more than one-half diopter, represented the optical defect of 75% of all sufferers. Not over one half of these cases complained of any defect in vision and those who did were usually suffering from ciliary spasm. Most cases of simple hyperopia possessed an abnormal vision for distance of 30-20, or even 40-20, and for this reason the parent often insisted that the child needed "no glasses." The symptoms were numerous but not so prolonged. They came in the afternoon or after using the eyes. Any one or combination of the following symptoms usually disappeared after the proper correction, viz: Pain in the eyes, eyebrows, forehead, temples or one temple, nausea but rarely vomiting, lassitude and exhaustion in the evening, lack of appetite for the evening meal, restlessness at night, intense nervousness in the morning, positive dislike for school or for any technical work, drowsiness and often apparent stupidity in school, associated with periods of intense nervousness simulating corea, neurasthenia with various combinations of nervous symptoms similar to those found with exophthalmic goitre, spells of atypical migrane and a desire to find amusement out of doors.

SYMPTOMS OF LOCAL IRRITATION.

As stated above, local irritation was not so common with the major defects as with the minor ones, possibly because the defective vision associated with the major ones prevented the use of the eyes for near work.

Styes, congestion of the conjunctiva, follicular conjunctivitis, photophobia, burning and itching of the lids were almost always found with uncorrected minor hyperopic defects.

Crossed eyes, or esophoria, were always found with the major defects of hyophoria, if at all. A tendency to hold the head down or to one side was indicative of marked hyperopic astigmatism.

Not one case of exophoria could be attributed to myopia as has been authoritatively described as possible, while 95% of esophoria was associated with marked hyperopia of one diopter or more. With reference to esophoria, it was interesting to note that if it was constant in one eye and associated with hyperopia, that the crossed eye was one with defective vision, while if the eyes crossed alternately that the vision was equal or nearly so in each eye. On account of the lack of coordination between accommodation and convergence the strong eye or the one with the keenest vision had evidently taken the lead leaving the image of the weaker eye to be discarded and so become increasingly weak from non-use. Only one case of esophoria with one eye crossed was found to have binocular vision, suggesting the necessity for the early prescribing of lenses in these cases, since the most satisfactory results are obtained before binocular vision is lost.

HEREDITY.

It was found that a child, whose one parent had optical defects, had not only the same kind of defects as the parent but even the same axis of astigmatism in 90% of all cases. When both parents had defects no rule for the error could be established. A very large per cent. of the parents of these children gave histories of eyestrain in their youth sufficient to cause them to lose interest in and fall out of school. Not over 80% of these parents had received a correction for their eyes until after leaving school.

CORRECTION WITH THE RETINASCOPE.

Any attempt to correct hyperopic astigmatism by the chart, without the use of a mydriatic in children, was found to be worse than foolishness because even if the child was capable of interpreting the chart the ciliary muscles were usually so irritated that a correction was made impossible.

The chart with the use of the fogging system was found useful in the routine of checking up other findings and especially for the correction of simple hyperopia. The use of the chart was not found satisfactory for the correction of hyperopic astigmatism, even when the accommodation was completely paralyzed, because a correction of astigmatism for twenty feet by this or by any method does not correct the trouble for the near or working distance in one-half of the cases within one-fourth of a diopter. The author would be pleased to demonstrate the fact to any one interested in the technique of refraction.

The static method of retinoscopy, with the fully paralyzed accommodation and fully dilated pupil was not found satisfactory for the correction of this kind of astigmatism. It was found indispensable for determining real myopia from apparent myopia or ciliary spasm, and for estimating the general amount and axis of astigmatism, but this method could not be depended upon for an exact astigmatic correction however absolutely the ciliary body had been paralyzed. This was because the irregularities of the cornea and lens increase from the visual axis outward toward their circumferences. This is suggested by the visual acuity one obtains by looking through a pinhole disk in startling contrast to the blurred vision one realizes through a fully dilated pupil. The retinascopic evidence of this increased irregularity became the source of great confusion in many cases. Various shadow phenomena, such as scissorlike movements from the exaggeration of a moderate amount of ordinary astigmatism or kaleidoscopic movements from mixed astigmatism with an exaggerated amount of chromatic aberation often disappeared entirely after the pupil had returned to normal. As it is useless to attempt to correct optical defects outside of the ordinary pupillary area, these peripheral shadow phenomena developed by the static method often became a source of confusion in making the exact necessary correction.

For this reason the dynamic method of retinoscopy gave the most exact and gratifying results in correcting the astigmatism for the necessary working distance, if used with a strong light of about 80 candle power, because all confusing light reactions were discarded.

If we use the static method of retinoscopy we must depend on a fully paralyzed accommodation; if we use the dynamic method we must depend on normal accommodation. I believe the failure to keep this in mind is the reason why so many fail to find any definite use for the

retinascope, the instrument indispensable for refraction in children.

IRREGULAR ASTIGMATISM.

Our efforts to correct defects of this kind with cross cylinders was not satisfactory, partially no doubt because it was not only difficult to make the correction for a child but next to impossible to find children of this age capable of maintaining a proper adjustment. Very striking results were obtained in three cases by blocking out the defective eye with a plus sphere. These defacts had been caused by scars. Two cases had suffered with phlyctenular ulcers on the affected eye, at various intervals during the last two years. They had gone through the hands of two very competent physicians without receiving any apparent benefit. In these cases the Wassermann and tubercular tests were negative.

Since these defects have been fogged out the corresponding eyes have remained in perfect health and the possessors have progressed rapidly in school and lost all previous nervous symptoms without further treatment. As these patients had binocular vision we may suppose that the brain found it impossible to fuse the imperfect with the perfect image, or at least that the effort to do so had in some way been the cause of the local and general irritation.

CORRECTION.

As not over one-half of hyperopes have any conscious defects for distant vision, and many of them, especially if their defect is simple hyperopia, have really an abnormally good vision for distance, it was often difficult to get the parent, much less the child, to understand why it was necessary for any one to wear glasses which did not increase the distant vision. To all such it was practicable to apply the term of "resting glasses."

The most practical rule for the correction of hyperopes was to give a full correction for the astigmatism for the working distance and add only enough sphere to fog to normal. Children do not like to be fogged above normal and there is no reason for doing it. The old rule copied and recopied from text-books to give the hyperope all the plus he will wear is perhaps a safe rule so far as the eye is concerned, but it is not always a satisfactory one to the patient. A better rule is to give the patient simply enough of the plus sphere to make his distant vision normal, viz: 20-20.

Hyperopia is a normal condition of infancy. In the child it is rather a lack of development than an abnormal one. Many healthy children have moderate hyperopic defects without symptoms. Just what per cent. of hyperopic children do not need correction, so far as I know, has not been determined. From the fact that so many healthy hyperopes do not need correction the author has always been dubious about the advantage of low correction of plus .37 spheres or less. It is difficult to understand how a plus sphere of .25 could give much relief to an overstrained accommodation, especially when a minus sphere of an equal strength may apparently give an equal benefit. It is conceivable that even a plus .12 D. cylinder might be of benefit if it acted as a correction for the near or reading distance. The relief from low corrections, however, indicated a larger percentage of benefits here in this climate than usually reported, but this was proven to be brought about only from the exclusion of the excessive ultra-violet rays so characteristic of this locality. The ultra-violet rays are too short in their vibration to be of any benefit to vision but consume the visual substance of the retina. This may explain why so many blonds with especially large pupils, whether hyperopic or myopic of low degrees, receive benefit from low correction which can do little more than obstruct an excess of light through indirect vision. Plain lightly smoked glass gave as much benefit in these low defects even where the error was that of a low grade of hyperopic astigmatism. At present we see lenses of almost every color being worn on the streets, and although they correspond more nearly with fashion than with usefulness, they testify to the evil effects of strong light on the eyes. Colored lenses not only product an unnatural effect which becomes tiresome, but cut out less of the ultra-violet light than does the ordinary Crook's glass.

A simple minus lens is always a questionable prescription for children and should always be verified since the apparent slight myopia is so often the manifestation of hyperopia in the form of a clonic or tonic ciliary spasm, and if this be true the added minus lens will only increase the disturbance by making the patient artificially more hyperopic. For the same reason the over-correcting of any form of myopia is sure to cause trouble.

TRANSPOSITION OF FORMULA.

It is customary for all lens grinders to transpose prescriptions into their simplest form for grinding. In our experience this made no difference where the major amount of the correction was plus, but it did not do as a rule to make a transposition when the major amount of the correction was minus, and almost never when the sphere and cylinder were both minus. The myopic eye having but a slight amount of accommodation is not able to make any change in its focal distance. This statement may excite criticism but if an apple be cut to illustrate a simple case of myopic astigmatism one may readily see that, if an attempt be made to make the same correction by transposing the cylinder into a plus one with an opposite axis the focal distance is changed.

PUPILLARY DISTANCE.

In this series of cases it was found to be most satisfactory and even necesary to give the child the proper pupillary distance for its near work, especially in prescribing cylinders, otherwise the cylinder often did more damage than good. It always seemed advisable to take account of the pupillary distance which was used in the fitting frame when the given correction was prescribed, and not to make the corretcion, and then without taking into account the pupillary distance used while refracting to disregard it and take a different measurement later. This may amount to as

great a mistake as it would be to change any other part of the formula. As it is impossible to give a pupillary distance for both near and distance in a monofocal lens it is best to leave the lenses decentered for distance when the eye is relaxed.

ADJUSTMENT.

Our experience suggested strongly the desirability of an optical inspector for the public school system. A nurse not only competent to make adjustments but capable of giving children a few simple instructions in the care of their lenses. If the child's frames are bent or the lenses are in any way out of the proper position they cannot receive either benefit or comfort from the most accurate corrections. It was found to be undesirable to permit children to wear rimless lenses. They are too easily broken and endanger the eyes. A small lens, an O. E., 1.75 m.m. thick, with an ordinary rim, has not been known to be the cause of an accident although it is advisable to have children remove their glasses when engaged in active sports.

SUMMARY.

1. About 98% of all children between the ages of 6 and 12 who suffer from optical defects in this climate are hyperopic.
2. Other things being equal the more the plus required in the correcting formula the more the reflex irritation before the correction is made.
3. Not all healthy hyperopes need correction.
4. More attention should be paid to the effect of the bright light of this climate on the eyes of children.
5. Simple forms of myopia are possibly more common than suspected, since they seldom give any reflex symptoms unless associated with a large or light-colored iris.
6. Myopes should never be over-corrected because the artificial hyperopia established thereby makes the condition for eye-strain possible.
7. Great care should be taken to differentiate simple myopia from ciliary spasm, as this is possibly the most common mistake made in the refraction of children.
8. The static method of retinoscopy is the most convenient for the differential diagnosis on account of the paralyzed accommodation, but as optical defects increase from the visual axis outward, the dynamic method by which the contracted pupil discards the confusing and unimportant shadows is the most accurate and the only method of making the correction for astigmatism for the near distance.
9. Not over one-half the corrections for hyperopic astigmatism made for 20 feet correct the near or working distance within one-quarter of a diopter in young children.
10. When a child and only one parent have optical defects the defects of each are of the same kind even to the axis of astigmatism in 90% of all cases.
11. Most cases of constant squint in one eye lose the power of binocular vision before the sixth year.
12. A diffused image from one eye such as caused by a scar when associated with binocular vision should be fogged out if the proper correction cannot be made or determined.
13. Children should be given instruction in regard to the care of their lenses.
14. The pupillary distance for near work should be given to school children.
15. Rimless lenses should not be prescribed for children. Small thick lenses properly mounted with rims will not produce any injury to the eye in case of an accident.

SOME OCULAR DEFECTS IN MENTALLY RETARDED CHILDREN.

By HANS BARKAN, M. D., San Francisco, Instructor in Ophthalmology, Stanford University Medical School.

The affections of the eye in childhood are various and in many instances peculiar to the eye of the child or young adult—scrofulous Keratitis, some forms of blennorrhea of the sac, and some forms of conjunctivitis; interstitial luetic Keratitis, certain forms of tumor, as glioma, and a certain number of congenital defects, or at least congenital malformations, of certain structures. These latter are found, in my experience at least, very much more frequently in the eyes of mentally retarded children than in the normal child. Mentally retarded children, for the purpose of this paper at least, I will consider as being divided into two groups: those whose retardation is due to physical handicap which can be removed—tonsils, adenoids, highgrade myopia or other marked errors of refraction; second, those where in the absence of any marked general or local physical faults, a certain degree of mental retardation is present, evidenced often not only by negative inability to learn as others of the same age do, but also by positive traits; the children are unruly, disorderly, disobedient; petty thieving, constant truancy from school, confirmed lying and other evidences of abnormal mental status are common. It is of this second class particularly that I wish to speak. The visual tests display as the most common abnormality, either a marked difference in the vision of the two eyes or low vision in both equally. The first condition is perhaps slightly the more frequent. The poorer eye is inclined to stand slightly divergent in distant vision, though it usually, in fixing a near object converges as properly as its fellow. The muscular balance tests seldom even approximate the normal, but show marked degrees of either exophoria or esophoria, usually the former. Color perception centrally is usually normal but not so in the periphery, where a marked concentric contraction for colors is often evident. In the judgment of this latter condition one has to be particularly careful, as the mental status is often uncertain and the answers, unless checked up repeatedly, not to be relied on. The cause for this unilateral or bilateral poor vision may be (1) refractive in type (2) due to fundus changes, varying in type from the residue of a specific retinitis and choroiditis, to nothing more than an exaggeration of the limits of the normal types; this latter condition, which I will take up later in more detail, is very much the more frequent of the

two; indeed it is present in the great majority of these children. Concerning ourselves with the refractive status for a moment; by far the great majority are farsighted with some astigmatism, some are high astigmatics in addition to being farsighted; a very small number are myopic. This brings us to a not uninteresting biological point. Many animals are farsighted, the carnivora and birds especially; so are practically all new-born children. The markedly hypermetropic eye harks back somewhat to the build of eye of animals lower in intelligence than we; while of positive advantage to the animal it is of detriment to us. Our visual needs do not call for excessively clear distant vision, or for excessively keen judgment of space, such as the eagle and hawk undoubtedly employ by the sense of accomadative contraction of their ciliary muscle. This eye then—the excessive hypermetropic one—is in the human more akin to the animal eye, and less adopted to our needs than the emmetropic or slightly myopia eye. That this latter condition is met quite infrequently in the cases under discussion is of interest from diametrically the opposite standpoint. It is the eye of the student, the type of eye most often transmitted to their progeny on the hereditary basis, from families of students or close observers in skilled employments—such as watchmakers for instance. That the children under discussion come mostly from a class of people of low intellectual attainment and therefore not of the artisan class we all know. The vision can in many instances be brought to normal with the proper glasses. If, however, fundus changes, either distinctly pathological or of the type touching on the extreme border of the normal variations, be present, it is seldom possible to improve the vision materially. In those with pathological changes—pepper and salt retinitis, for instance, we of course do not expect marked improvement, though we may obtain some. Those with changes just outside of the normal variation, but not of a pathological nature—that is, not due to disease of the structures as such—we also are seldom able to improve materially by glasses. What are these changes? Clinical experience has formed a small chapter on this subject in my mind, an abstract of which would be as follows:

(1) Fundus without or with very little pigment.

(2) Excessively hyperemic discs, margins not distinguishable, vessels, especially veins, dark and dilated (pseudo-neuritis).

(3) Disc normal, veins and arteries though normal in calibre, forming many small curves in their course over the fundus.

(4) Discs of normal color and outline, but vessels branching off fan-shaped. ("Sprawling" off the disc is the descriptive phrase most applicable.)

(5) Excessively pale disc, vessels of normal size.

(6) Extensive preservation of the myelin sheathes in certain bundles of nerve-fibres usually near the optic nerve entrance.

Any of the types mentioned militate against much improvement of vision by glasses. Why they should, is another question. The first one is easily explained. Flooded by light, due to the lack of pigment covering, as fine distinctions cannot be made as can by sensory elements possessed of enough protective covering to filter out the excess of light: we know how much sharper the values of a picture come out when viewed through a small tube or through one's hand held up as a shading device—or more familiar still, the sharpening of an image on a photographic plate by the proper amount of closure of a diaphragm. The second, third and fourth types owe their subnormal vision probably to anomalous blood supply, though in what specific way this militates against acute vision is hard to say. The fifth, probably to excessive glia formation about the nerve fibers and the last is distinctly a reversion to a lower type; in many animals the myelin sheathes are not entirely dropped at the lamina cribrosa; in the rabbit this is most beautifully observed. These in brief are the fundus findings of a considerable number.

As regards the muscular balance of their eyes. In general I feel that "muscular imbalance" has been popped at the laity and the medical practitioner like a bugaboo in a jack-in-the-box—its prevalence and importance grossly exaggerated and all ills that flesh is heir to laid to the mistake Providence made in not giving us a rigid steel globe and iron cables to haul the eye about, instead of our soft and elastic eye with its give and take pulleys and ropes. In spite of the fact that it is "grossly exaggerated," as Mark Twain said of the report of his death, it is of importance in mentally retarded children. These, partly due to their fundus defects, partly because of their refractive error, do not see well, have often no especial desire to see objects acutely, or if they have, find that they must strain too much to do so; as a consequence, they give up trying to correct their visual defect, and with this an abnormal relation between their accommodative and converging impulses is established, with the result that one or both eyes incline to swing in or out. This, as it would result in diplopia, they attempt to overcome by excess nervous impulses, resulting often in headache, irritability and facial contortions of varying degree. As before stated, muscular imbalance of marked degree is a frequent finding, and its correction by the proper glasses often changes markedly the habitus of the child. From these imbalances a fixed strabismus frequently develops; often amenable to cure by glasses if attended to early, but more often do we find that a cosmetic operation only must be resorted to, as the child has lost its vision by reason of an established squint over a period of some years. Considered in large groups, we do not find that anatomical congenital malformations—such as colomboma of the iris and choroid, dermoids of the conjunctiva, epicanthus, micropthalmus, aniridia, cataract and so forth—are more frequent among these children than among mentally normal ones. They are, however, more frequent in idiots and imbeciles than in mentally normal children. A certain relation between ocular defects and the general appearance of the child has often struck me. Those with the poorer vision, whether due to fundus conditions

(Continued on Page 193.)

SCIENTIFIC PROGRAM FOR GENERAL AND SECTION MEETINGS

COMMITTEE,
HARRY E. ALDERSON, Chairman,
FITCH C. E. MATTISON,
WALTER V. BREM,
ROBERT A. PEERS, Secretary.

SECTION CHAIRMEN AND SECRETARIES.

Eye and Ear Section.

DR. HANS BARKAN, San Francisco, Secretary.
DR. E. C. SEWALL, San Francisco, Chairman.

G. U. Section.

DR. FRANK HINMAN, San Francisco, Chairman.
DR. WM. E. STEVENS, Secretary-Treasurer.

Gynecology and Obstetrics Section.

DR. TITIAN J. COFFEY, Los Angeles, Chairman.
DR. A. B. SPALDING, San Francisco, Secretary.

Scientific Program.

DR. ROBERT A. PEERS, Colfax, Secretary.
DR. H. E. ALDERSON, San Francisco, Chairman.
DR. F. C. E. MATTISON, Pasadena.

Nervous Diseases and Psychiatry Section.

DR. CHAS. LEWIS ALLEN, Los Angeles, Chairman.
DR. WALTER F. SCHALLER, San Francisco, Secretary-Treasurer.

NOTICE FOR THOSE DISCUSSING PAPERS.

You are requested to give your name and address on arising.

GENERAL PROGRAM

Tuesday Morning, April 16, 1918,

9:00 o'clock.

1. INVOCATION:
   REV. DORWORT
2. ADDRESS OF WELCOME:
   JUDGE J. A. BARDIN
3. PRESIDENT'S ADDRESS:
   J. HENRY BARBAT
4. REPORTS OF COMMITTEES:
   (a) **Arrangements**—T. C. Edwards, Salinas, Chairman; P. T. Phillips; Santa Cruz; W. B. Teaby, Del Monte.
   (b) **Scientific Program**—Harry E. Alderson, San Francisco, Chairman (1918); Robert A. Peers, Colfax, Secretary (1919); Fitch C. E. Mattison, Pasadena (1920); Walter V. Brem, Los Angeles (1921).
   (c) **State Committee on National Defense**—H. M. Sherman.
   (d) **Public Health**—Robt. T. Legge, Chairman; A. B. Cooke, W. H. Irwin, W. W. Roblee, J. L. Pomeroy.
   (e) **Social Insurance**—René Bine, Chairman; Geo. Reimle, G. H. Kress.
   (f) **Grievances**—Morton R. Gibbons, Chairman; Sol Hyman, T. A. Wistrand.
   (g) **Advertising**—R. E. Bering, T. E. Shumate.
   (h) **Public Policy and Legislation**—George E. Tucker, Chairman (1918); Ray L. Wilbur (1919), Wm. Le Moyne Wills (1919), F. F. Gundrum (1918), W. R. Molony (1920), Walter B. Coffey (1920).
   (i) **The Regulation of the Practice of Medicine in California Since 1914**—H. E. Alderson, San Francisco.
   (j) **Report of Committee on Industrial Accident Insurance**—C. P. Thomas, Los Angeles, Chairman; John H. Graves, San Francisco; Morton R. Gibbons, San Francisco; John C. King, Banning; B. F. Church, Redlands.

THE REGULATION OF THE PRACTICE OF MEDICINE IN CALIFORNIA SINCE 1914.

HARRY E. ALDERSON.

Purpose and scope of the Medical Practice Act primarily to protect the public. Regulation of practice of medicine purely an educational problem and should not be political. Sects and cults as such not to be considered, provided applicant has had proper basic education, can make diagnoses and is able to assume responsible duties of physician. If he has sufficient education it does not matter what sect or cult he professes to follow. The required year in physics, chemistry and biology of college grade, in addition to high school diploma followed by a four-year medical course at this time sufficient. Tests of fitness should include careful scrutiny of pre-medical and medical credentials and thorough periodical investigations of medical schools from which applicants come. If this valuation of actual pre-medical and medical work is thorough, the Board's written examinations relatively unimportant. Examinations easily passed. The "approval by the Board" clause very important for regulation of teaching institutions, and a means of establishing standards. Complete reciprocity with other states very desirable. Composite boards compared with a single Board. Two theories: First, the Board members represent the sick public whom they are supposed to protect. Second, members represent various sects, cults and special interests only. Prosecution of violators of the law. Future outlook. California's law a good one and the profession should combat every effort to have it changed. State Medical Society should use its great potential political power to assure only sane medical legislation.

Tuesday Afternoon

2:00 o'clock.

1. CLINICAL ASPECTS OF THE FASTING TREATMENT FOR DIABETES.
   (Lantern Slides)
   ALBERT H. ROWE.

   I. A complete physical examination in all diabetics is necessary.
   II. Individualized treatment for each patient is important.
   III. The patient must learn the caloric values of foods and must keep sugar free.
   IV. The weight of the patient must usually remain below normal.
   V. Absence or presence of acidosis must continually be watched.
   VI. Exercise is most important for the diabetic.
   VII. Environment, habits and mental attitude of the patient must be controlled.

   Note.—Lantern slides of the laboratory charts of several unusual cases will be shown.

   Discussion opened by Lovell Langstroth.

2. THE TREATMENT AND LABORATORY CONTROL OF DIABETES (projectoscope).
   LOVELL LANGSTROTH.

   Introduction. Work at the University of California Hospital; time consumed; equipment required; help necessary.

   Diet. Care in figuring out; weighing what is left; broth during starvation; whiskey during starvation; cathartics; general principles of determination of tolerance.

   Urine. Collection and preservation; measurement; calibration of glassware; significance of total nitrogen; ammonia, urea nitrogen, creatinine, ammonia-nitrogen ratio, acetone bodies, sugar, chloride and carbohydrate-balance.

   Blood. Plasma carbon-dioxide combining power; blood sugar; blood chlorides.

   Decision as to whether cases should be treated at home or in hospital according to severity of case; mild cases without acidosis may be treated at home; severe cases should be treated only with laboratory facilities.

   Discussion opened by Albert H. Rowe.

3. METABOLISM IN DIABETES, NEPHRITIS AND CHOLECYSTITIS.

LORENA M. BREED.

Blood lipoids, blood sugar and carbonate content of blood in diabetes as compared with other diseases; blood nitrogen and carbonate content in nephritis as compared with other diseases; the importance of differential, as well as total nitrogen estimations, also nitrogen balance in the differentiation of nephritis and cholecistitis.

Discussion opened by FREDERICK SPEIK.

4. THE KARELL CURE REVIVED.

(Lantern Slides).

NATHANIEL B. POTTER

A starvation of fluids and solids. Other starvation cures. Historical account of cure. Revival of cure. Theoretical explanation of its action and value. Its practical application. Modifications and their comparative effects. Illustrative cases and charts. Conclusions.

Discussion opened by W. JARVIS BARLOW.

5. COMPARATIVE STUDIES IN ESTIMATING ACIDOSIS.

ARTHUR STANLEY GRANGER.

Foreword. Technique of the various tests used in this work. Conditions under which tests were made. Diseases studied. Figures in abnormal cases. Comparison of results obtained. Summary. Conclusions.

6. THE PREVALENCE OF STREPTOCOCCAL INFECTIONS.

RACHEL ASH.

I. Introduction. The types of streptococci—their morphology and pathogenicity.
II. Epidemiology. The various epidemics of streptococcal infections that have occurred in the United States during the last ten years.
III. Diseases due to streptococci—an especial consideration of diseases of the respiratory tract.
IV. Illustrative case reports.
V. Conclusion. The importance of the recognition of septic sore throat, its complications and sequelae, as a safeguard to public health.

Wednesday Morning, April 17

9:00 o'clock.

1. EXPERIMENTAL TYPHOID CARRIERS.

K. F. MEYER.

The various factors, such as immunization, diet, starvation, etc., which favor the gall-bladder-carrier-state in rabbits, guinea pigs, etc., will be discussed. The inhibitive influence of the liver bile in contrast to the bladder bile on the typhoid bacillus, has been carefully studied. The presentation of the main results thus far obtained will lead to a consideration of the pathogenesis of gall-bladder and renal typhoid carriers in general. The experimental studies suggest certain procedures to be followed in the prevention of a transitory or a chronic typhoid carrier state in man.

2. RADICAL CURE OF AMEBIASIS WITH COMBINATION OF EMETIN HYDROCHLORIDE AND NEOSALVARSAN OR ALLIED PRODUCTS.

HERBERT GUNN.

Recurrences, the rule after practically all forms of generally accepted methods of treatment.

Inefficacy of emetin hydrochloride to destroy cysts and often even motile amebae although symptoms may be entirely relieved.

Observations of the effect of neosalvarsan or allied products used alone appear to warrant belief that cysts are not destroyed.

Combined treatment with neosalvarsan or allied products administered intravenously and emetin hydrochloride hypodermically will destroy motile amebae and cysts in over 80 per cent. of cases.

Report of cases treated.

Fallacy of drawing conclusions as to favorable results of treatment before sufficient time has elapsed.

Cases in this series under observation for at least two months and some for over a year following treatment.

Observations on the effects of alcresta, ipecac, emetin, bismuth, iodide and oil of chenopodium.

Discussion opened by ALFRED C. REED.

3. SCHISTOSOMIASIS IN CALIFORNIA.

ALFRED C. REED.

Definition. Geography and occurrence in United States. Clinical description and treatment. Prognosis. Report of four cases in San Francisco. Economic and social importance of the disease. Method of spread and intermediate host. Prophylaxis. Danger of endemicity in United States.

Discussion opened by HERBERT GUNN.

4. THE VALUE OF RENAL FUNCTIONAL STUDIES IN THE PROGNOSIS AND TREATMENT OF NEPHRITIS (projectoscope.)

SAMUEL W. HURWITZ.

1. A brief consideration of some of the more recent clinical chemical methods of testing the functional capacity of the kidneys. Reference will be made especially to the study of renal function by the determination of the power of the kidneys to eliminate some of the normal urinary constituents, fluid, salt and nitrogen.
2. The proper interpretation of such functional methods will be considered and their value in differentiating the different types of nephritis will be discussed.
3. Attention will be directed to those clinical chemical tests which afford the physician some information concerning the severity of the functional derangement and its prognosis.
4. The value of such functional tests as guides to the more rational treatment of nephritis will be presented and the rationale of limiting the protein and salt ingestion in such cases will be especially considered.

Discussion opened by A. S. CUMMINGS.

5. VINCENT'S ANGINA WITH A REPORT OF AN UNUSUAL CASE.

JOSEPH M. KING.

Brief review of the literature.
Division of cases into mildly acute; severe acute, and long continued chronic cases.
Relation of Vincent's Angina to diphtheria carriers.
Symptomatology and treatment, with special reference to probable futility of various treatments so far suggested.

6. INTESTINAL OBSTRUCTION.

HARLAN SHOEMAKER.

Various kinds of obstruction.
Duration of obstruction.
Causes of obstruction.
  (a) Hernias.
  (b) Volvulas.
  (c) Bands secondary to previous surgery.
Conditions found at operation.
Methods used to overcome the various mechanical obstructions.
  (a) Without distention and fluids in the gut.
  (b) With distention and fluids in the gut.
Choice of anesthetic.
  (a) Ether.
  (b) Nitrous oxide.
  (c) Spinal anesthesia.
Disadvantages of a general anesthetic in obstruction cases distended with fluid.
Time of depression caused by spinal and methods of overcoming this dangerous period.
Operative.
  Resection of the gut.
  Non-resection of the gut.
Post-operative treatment.
  Overcoming dehydration.
    (a) Due to obstruction.
    (b) Due to permanent drainage of gut.
    (c) Toxemia urea excretion from gut.
Conclusions.

7. RECONSTRUCTION OF THE HIP-JOINT (projectoscope).

ELLIS W. JONES.

Bone transplantation in the treatment of acquired paralytic dislocation of the hip.
Technique of operation.
Indications for operation.
Comparison with other methods.
Case reports—Paralytic Luxation of sixteen years' duration successfully operated by this method.
(To be illustrated by radiographs and lantern slides.)

Discussion opened by HARRY M. SHERMAN.

Wednesday Afternoon

2:00 o'clock.

1. THE SUPPRESSION AND CONTROL OF VENEREAL DISEASES IN THE ARMY THROUGH MILITARY AND CIVIL CO-OPERATION.

COLONEL L. MERVIN MAUS,
Medical Corps, U. S. Army,
Dept. Surgeon, Western Dept.

2. VENEREAL DISEASE CONTROL IN CALIFORNIA.

HARRY G. IRVINE.

General need as War measure. Relation of the problem of prostitution. Conditions before the campaign started. What has been accomplished.

3. **DISCUSSION OF EXPERIENCES OF MEDICAL ADVISORY BOARD NO. 5 (Draft Registrants).**

GEORGE H. EVANS,
HARRY M. SHERMAN,
S. H. HURWITZ,
FRANK HINMAN.

4. **AFTER-TREATMENT AND REHABILITATION OF THE WOUNDED (With Demonstration of Improvised Apparatus and Lantern Slides).**

LEO ELOESSER.

General principles. Stimulation of interest in recovery. Graphic methods of recording progress. Sir Robert Jones' principle of the orthopedic workshop. Uncertainty regarding compensation as a retarding factor.

After-treatment of head injuries.

After-treatment of injuries to the extremities: shoulder, elbow, hand and fingers. Simple means and apparatus for the treatment of contractures.

Treatment of injuries to the lower extremity. Exercises in bed. Apparatus for bed-exercises. When to allow patients out of bed. Crutches.

After-treatment of palsies.

After-treatment of amputations; simple protheses.

Discussion opened by EMMET RIXFORD.

5. **INTESTINAL OBSTRUCTION—CLINICAL AND EXPERIMENTAL OBSERVATIONS.**

G. H. WHIPPLE.

The non-protein nitrogen in the blood of individuals suffering from intestinal obstruction shows considerable fluctuation. Usually a high non-protein nitrogen indicates severe intoxication and a grave prognosis. The same observation holds in animal experiments.

The poison concerned in the intoxication of intestinal obstruction has been studied in considerable detail. Several substances may be concerned. Many chemical and physical reactions of this substance or group of substances have been studied by means of animal experiments. The substance is resistant to digestion and is not absorbed through the intact intestinal tract. It is produced by the activity of the intestinal mucous membrane.

Injection of this poisonous substance into the body causes profound modification of body metabolism. In sublethal doses this poison causes marked acceleration of nitrogen metabolism,—in other words, tissue autolysis in vivo.

The application of this knowledge to surgical practice will be discussed.

6. **BLOOD TRANSFUSIONS. INDICATIONS FOR AND RESULTS.**

A. H. ZEILER.

Review of the recent literature. Blood grouping and its relations to transfusions. Choice of donor. Technique for various methods of transfusion. Transfusion reactions. Various conditions and diseases in which transfusions are indicated. Analysis of cases transferred. Summary.

Wednesday Evening

(Hour to be announced later.)

Address for members and their friends on "The Medical Reserve Corps."

MAJOR HENRY D. JUMP, M. R. C.,
Committee on States Activities and Examinations, General Medical Board, Washington, D. C.

Thursday Morning, April 18

9:00 o'clock.

1. **AN ANALYSIS OF THE FIRST TWO HUNDRED CASES STUDIED AT THE SAN DIEGO DIAGNOSTIC GROUP CLINIC.**

B. J. O'NEILL.
ROBERT POLLOCK.

Advance of modern diagnosis. Its distinctive value. Consultation groups. The Consultation Clinic as expressed in Boston. The Diagnostic Group Clinic as expressed at St. Luke's Hospital, San Francisco. Distinctive features of the San Diego experiment. Brief sketch of its work to date. Analysis of the first two hundred cases. Age, sex, period of invalidism, complaint of patient, diagnosis made, how verified, subsequent course of case—follow-up system employed—all cases included in this analysis were diagnosed from six to fourteen months ago. Conclusions drawn from various features of this analysis.

2. **THE DIAGNOSTIC VALUE OF THE LUNG REFLEXES IN PULMONARY TUBERCULOSIS.**

F. M. POTTENGER.

Inflammation of pulmonary tissue causes motor, sensory and trophic reflexes in the skeletal muscles, and in the skin and subcutaneous tissue over them, the impulse acting through the sympathetics and the spinal nerves; also reflex motor and secretory disturbances in other internal viscera through the vagus and other branches of the cranio sacral division of the vegetative system. Vagus reflexes are sometimes counteracted by general toxemia stimulating the inhibitory action of the sympathetics and increasing flow of adrenalin. The explanation of these principles in the production of well established symptoms and clinical signs.

3. **THE INTERRELATIONSHIP OF ASTHMA AND PULMONARY TUBERCULOSIS.**

(Lantern).

PHILIP H. PIERSON.

Asthma often a symptom rather than a disease. Its existence in pulmonary tuberculosis is due to mechanical and toxic causes. Influence of asthma on already active tuberculosis. Latent tuberculosis may be predisposing factor in asthma. This type more frequent in children.

Discussion opened by F. M. POTTENGER.

4. **SYPHILIS OF THE THYROID GLAND—REPORT OF A CASE.**

EDWIN H. SCHNEIDER.

A short history of the cases previously reported will precede the report of my case.

The past history, clinical findings, laboratory findings, histological pictures and therapeutic results will be taken up in order.

Discussion opened by C. G. TOLAND.

5. **THE PREVENTION OF CONGENITAL SYPHILIS BY INTENSIVE TREATMENT OF SYPHILITIC MOTHERS DURING PREGNANCY.**

HANS LISSER.

I. The prevalence of congenital syphilis and difficulties of successful treatment.

II. Methods of Prevention:
   1. Postponing marriage until prospective parents are cured.
   2. Preventing conception until parents are cured.
   3. Antenatal treatment of infected mothers during pregnancy.

III. Statistics showing:
   1. Mortality among congenital syphilitics if mothers have not received any treatment whatsoever.
   2. Results, when mothers are treated before pregnancy.
   3. Results of Mercurial Treatment of pregnant mother.
      (a) In active maternal syphilis.
      (b) In latent maternal syphilis.
   4. Results of Mercurial Treatment of Luetic mother before and during pregnancy.
   5. Result of Salvarsan and Mercurial Therapy during pregnancy.

IV. Discussion of Antenatal Therapy and how it influences fetus via the placenta.

V. Detailed report of Antenatal Therapy upon seventeen Luetic mothers.
   1. Effect of treatment upon mother.
   2. Effect of treatment upon labor.
   3. Effect of treatment upon newborn to date.

Discussion opened by FRANK LYNCH.

6. **AUTOGENOUS COLON VACCINES IN TOXIC ECZEMA.**

JAMES A. JACKSON.
RAWSON J. PICKARD.

Eczema a symptom. Groups of cases due to external and to internal irritants. Fewer due directly to bacterial activity. To get etiologic treatment of each of various groups of cases requires coordination of many specialists, together with the dermatologist.

Cases due to bacteria may be grouped: (1) Local growth; (2) Focal infection; (3) Present group.

In several cases of toxic eczema with indicanuria theory formed due to improper decomposition in bowel due to perverted metabolism of prevailing type of B. Coli, and immunization attempted with vaccines. Method. Dosage.

Case groups:
   1. With much indican.
   2. Little indican.
   3. No indican.

Interpretation as confirming theory.

Thursday Afternoon

2:00 o'clock.

1. **BLOOD REGENERATION AFTER SIMPLE ANEMIA AS INFLUENCED BY DIETARY FACTORS.**

C. W. HOOPER.
G. H. WHIPPLE.

The regeneration of hemoglobin and red blood cells after simple anaemia, induced by hemorrhage, can be influenced at will by modification of the diet. The curve of blood regeneration on a meat diet is very rapid, a matter of days or only a few weeks. The

curve of blood regeneration on a diet rich in carbohydrates is very slow, requiring several weeks or even months. A bread and milk diet, which has always been considered complete and adequate, may prolong simple acute anaemia months before complete blood regeneration takes place. In the case of splenectomized animals the anaemia usually results in death.

Dogs were used in the experiments. One-fourth of the total amount of blood was aspirated from one of the jugular veins on each of two successive days. The animals were then placed upon the test diets. The following blood studies were made at intervals varying from four days to a week until complete blood regeneration had taken place. The hemoglobin was estimated. The red blood cells, white blood cells, platelets, reticulated red blood cells and red blood cells containing mitochondria were counted. The hematocrit, plasma volume and total blood volume were estimated.

Bile-fistula dogs—animals whose bile is completely excluded from the intes'inal tract—are able to manufacture hemoglobin and red blood cells with the same rapidity as normal dogs.

The influence of iron (Blaud's pills) and splenectomy on anemia will be discussed from a clinical standpoint.

2. A STUDY OF ACHYLIA GASTRICA BY THE FRACTIONAL METHOD (projectoscope).

E. C. FISHBAUGH.

A. Technic of fractional study of gastric secretions.

B. Consideration of cases of anacidity and delayed acidity.

1. Absence of hydrochloric acid and enzymes. (True achylia gastrica.)
2. Absence of hydrochloric acid but enzymes present.
3. Delayed stomach secretion. (Spurious or psychical achylia gastrica.)

C. Value of the fractional method in the differentiation of these types of cases.

D. Prognostic value of such a differentiation.

3. BLOOD PRESSURE STUDIES ON 300 NORMAL MEN BETWEEN THE AGES OF 19 AND 33 YEARS.

BERTRAND SMITH.

All readings made in the recumbent position first.

Comparison of pressure readings and pulse rate in changing from the recumbent to the standing position.

The effects of measured exercise. The stair-climbing test used on stairs with six-inch rise. Effects noted on area of cardiac dullness, pulse rate, respiration, systolic and diastolic pressures, together with duration of the pressure phases. Recovery time measured.

Cases also analyzed according to the following:

1. Stone's overload factor.
2. Tiegerstedt's efficiency factor.
3. Goodman and Howell's CS:CW ratio.
4. Crampton's vasomotor efficiency test.

The value of estimations of the second pressure phase and of recovery time after exercise. Importance of appreciating the marked effect of excitement and of the little value in first pressure readings. Value of some form of exercise test and of the vasomotor test as aids in the early recognition of disturbed functional and organic cardio-vascular efficiency.

4. THE PREVENTION OF POST-OPERATIVE GAS PAINS (Lantern).

W. C. ALVAREZ.

In treating flatulence the writer believes the emphasis has been placed wrongly upon getting the bowel clean. The gas is commonly ascribed to fermenting material, but research workers agree that interference with the intestinal circulation is the important factor. Normally the gases arising in the bowel are taken up by the blood and excreted by the lungs. Purgation upsets this mechanism. It also paralyzes some regions of the gut and makes others unusually irritable. Accumulations of gas become trapped in weakened segments between more irritable ones. Research workers and many surgeons agree that the best way to avoid gas pains is to omit pre-operative purgation.

Discussion opened by W. I. TERRY.

5. PRACTICAL INFANT FEEDING; POINTS WHICH THE GENERAL PRACTITIONER SHOULD KNOW (projectoscope, blackboard, and accessories).

LULU H. PETERS.

Causes of the failure of percentage feedings. Caloric standards. Whole milk formulas. Rules for computing easily mastered and remembered. Rules for feeding from birth. Weaning, diarrhea, constipation and vomiting in the artificially fed. Earlier feeding of strained vegetables, cereals and fruit juices. Results.

Discussion opened by A. J. SCOTT, Jr.

6. PITFALLS IN THE DIAGNOSIS AND TREATMENT OF SENILE HYPERTROPHY OF THE PROSTATE. ITS CONSIDERATION FROM THE GENERAL PRACTITIONER'S STANDPOINT.

W. D. DAKIN.

Errors in diagnosis. Differential Diagnosis. The more dependable subjective and objective symptoms. What the family physician can do to make the prostatic more comfortable and help prepare the patient for surgical intervention if that procedure is necessary. The patient's treatment at home, in the office or hospital.

Discussion opened by VICTOR G. VECKI.

SCIENTIFIC EXHIBITS

1. Stanford University Medical School.
   (a) Obstetrical Pathological Specimens from the Women's Clinic.
   ALFRED BAKER SPALDING.
   (b) Specimens from the Eye Clinic.
   HANS BARKAN.
   (c) Pathological Specimens from the Genito-Urinary Clinic.
   R. L. RIGDON.
2. Continuous Irrigation Apparatus for Bladder.
   FRANK HINMAN.
3. Eye, Ear and Nose Models.
   P. DE OBARRIO,
   College of Physicians and Surgeons of San Francisco.

PROGRAM OF THE SECTION OF OBSTETRICS AND GYNECOLOGY

Chairman, J. Titian Coffey, Los Angeles.
Secretary, A. B. Spalding, San Francisco.

Tuesday Afternoon

2:00 o'clock.

1. TREATMENT OF FIBROIDS BY X-RAY.

HENRY J. KREUTZMANN.

1. Exposition of the justification to obtain a symptomatic cure in view of the non-malignant character of fibroids of the uterus.
2. Tabulation of my own cases according to:
   a. Age.
   b. Kind of tumor.
   c. Size.
   d. Symptoms.
   e. Complications.
   f. Results.
3. Summing up the indications under these heads:
   a. Where X-Rays should be used.
   b. Where X-Rays should not be used.
   c. Where X-Rays may be used as a matter of choice.

Discussion opened by L. H. HOFFMAN.

2. CESARIAN SECTION, INDICATIONS AND TECHNIQUE.

LYLE G. McNEILE.

Historical data; development of Sanger operation; influence of decreasing mortality upon frequency of operation; change in accepted indications resulting from decrease in mortality; present furor will be succeeded by more sane conception of scientific indications; in considering methods of delivery must consider contraindications, maternal mortality, fetal mortality, immediate morbidity, subsequent morbidity due to operation. If these factors considered, Caesarian Section indicated only if it gives a lower mortality and morbidity than other methods of delivery.

Contracted pelves, tumors, malpositions, eclampsia, placenta previa, premature separation of the placenta, may in selected cases indicate operation.

Time of operation; preoperative treatment; anesthetic; high or low incision; control of hemorrhage; packs, method of suturing uterus; importance of carefully suturing abdominal wall; post-operative treatment; common complications, statistical table of author's cases.

Discussion opened by F. M. LOOMIS.

3. RESULTS FOLLOWING OPERATIVE TREATMENT OF PELVIC INFLAMMATORY DISEASE IN THE STANFORD UNIVERSITY CLINIC.

JOHN A. SPERRY.

Study of answers to questionnaire.

Operative results. Remarks on differential diagnosis of pelvic inflammatory disease.

Remarks and Quotations from Literature on Treatment.

Conclusions in regard to:

1. Conservative Medical Treatment.
2. Conservative Operative Treatment.
3. Radical Operative Treatment.

Discussion opened by H. P. NEWMAN.

4. CONTRACTED BLADDER IN WOMEN.

J. CRAIG NEEL.

The etiological factors in contraction of the bladder in women are: Chronic inflammation, complete incontinence of urine and foreign bodies; such as calculi and new growths, both benign and malignant. The pathology depends upon the primary cause, as well as the duration.

The methods of treatment will be discussed, calling attention especially to the use of papaverine hydrochloride.

Discussion opened by FRANK HINMAN and A. LARTIGAU.

Wednesday Morning, April 17

9:00 o'clock.

1. ELECTION OF OFFICERS.

2. PUBIOTOMY (Lantern).

H. A. STEPHENSON.

A. Pubiotomy is not intended to supplant Caesarian Section.

It is often indicated:

1. In moderately contracted pelves, where the test of labor fails to bring about spontaneous birth.
2. In funnel pelves of pronounced degree especially in young women.
3. In primiparous patients who have large babies, which present by the breech.

B. Technic of the operation requires well-trained assistants and the facilities of a hospital.

C. Prognosis for both mother and child is good.

D. Report of cases.

Discussion opened by FRANK C. AINLEY.

3. TREATMENT OF INOPERABLE UTERINE CANCER.

FRANK W. LYNCH.

Types of uterine cancer and methods of growth.

Definition of operability and inoperability.

Operable cases seldom present other symptoms than bleeding or vaginal discharge.

We should exclude loss of weight and cachexia from our text-book considerations of cancer as a surgical phenomena.

Review of various methods of treatment of inoperable uterine cancer, comparing the actual cautery with the cold ion and the so-called Percy methods vs. acetone.

Report of cases treated with radium.

Discussion opened by CHESTER J. TEASS.

4. RADIUM IN THE TREATMENT OF UTERINE CANCER WITH CASE REPORTS (projectoscope).

REX DUNCAN.

The author will discuss briefly the dose and technic of application and the histological action of radium in uterine cancer, with special reference to recurrent and inoperable cases. Recent literature on the subject will be briefly reviewed and about fifty cases treated during the past two years by the author will be reported in diagrammatic form.

Discussion to be opened by CHESTER J. TEASS.

PROGRAM OF UROLOGIC SECTION

Tuesday Morning, April 16

1. THE DIAGNOSTIC SIGNIFICANCE OF TUBERCLE BACCILURIA.

LEWIS MICHELSON.

Does the finding of Tubercle Bacilli in the urine indicate a tubercular process in the genito-urinary tract in all cases, or may it be an excretory bacilluria from a wholly different focus?

Report of cases.

Discussion opened by FRANK HINMAN.

2. GONORRHEA AND SYPHILIS IN WOMEN.

WM. E. STEVENS.

Anatomical and functional differences between the male and female genito-urinary organs. The influence of the position of the urethra upon infections of the urinary tract. Skenes glands and their importance in diagnosis and treatment. Organisms found in infections of the cervix. Bartholin glands and urethra. The complement fixation test for gonorrhea in women. Pathological conditions of the bladder, ureter and kidney, more common in women and the influence of pelvic conditions upon the etiology of the same.

Discussion to be opened by JOHN A. SPERRY.

3. A PLEA FOR A COMPLETE UROLOGIC DIAGNOSIS AT ONE SITTING (projectoscope).

MARTIN KROTOSZYNER.
GEO. W. HARTMAN.

In the majority of renal lesions and particularly in conditions suggestive of involvement of the genito-urinary tract, the various urological diagnostic methods are usually practiced at several sittings, necessitating repeated instrumentation entailing pain, discomfort and loss of time.

These disadvantages are obviated by the application of our method, which combines reliable diagnostic results with least discomfort to the patient at one sitting and which, under favorable circumstances, can be completed in about one hour.

Description of technique.

Presentation of tables of normal and pathological cases.

Conclusion.

Discussion opened by FRANK HINMAN.

Tuesday Afternoon

1. SEMINAL VESICULOTOMY IN THE TREATMENT OF GONORRHEAL RHEUMATISM.

JAMES R. DILLON.

Slow appreciation of the value of operations for chronic seminal vesiculitis. Mechanical difficulties for spontaneous drainage, due to anatomy and pathological changes. Review of literature recording brilliant operative results of seminal vesiculotomy for gonorrheal rheumatism. Bacteriology of the infection. Pathological changes. Function of the seminal vesicles and effects of operations on.

Report of cases.

Conclusion.

2. SOME EXPERIENCES IN THE TECHNIC, PRE-OPERATIVE AND POST-OPERATIVE TREATMENT OF SUPRAPUBIC PROSTATECTOMY CASES.

HERBERT A. ROSENKRANZ.

A discussion of the pre-operative conditions that influence prognosis. Results in tabes, pulmonary and urogenital tuberculosis, endocarditis and myocarditis, cachexia, malignancy, epididymitis, cystitis, neuritis, acute and chronic uremia. Indications for the two-stage operation.

Technic: Armamentarium, choice of incisions, method of enucleating and drainage, accidents, secondary operations, fistulae, spinal anesthesia, hernia. Remarks on clinical pathology with demonstrations of specimen. Demonstration of new instruments.

Post-operative treatment: The avoidance of hemorrhage, embolism, sloughing and gaping of wound, delirium, renal and cardiac insufficiency.

3. DIAGNOSIS AND TREATMENT OF GLANDULAR OBSTRUCTION AT THE NECK OF THE BLADDER. (Projectoscope.)

LOUIS CLIVE JACOBS.

Enlargements at the neck of the bladder.

A consideration of the anatomical, pathological and clinical manifestations.

Discussion of case history with results of fulgurating methods for their eradication.

Lantern slide demonstration

4. ULCER OF THE BLADDER.

ARTHUR B. CECIL.

Under the term "Ulcer of the Bladder" will be considered only what might be called simple ulcer, that is, ulcer in which the urine from the kidneys is negative and which is independent of a general cystitis, the bladder urine being normal to culture. Tuberculous ulcer is not considered in this group. Historical consideration, review of the literature, report of two cases with operative findings, pathological reports and post-operative notes.

Discussion opened by WILLIAM E. STEVENS.

Wednesday Morning

9:00 o'clock

1. DIVERTICULA OF THE URINARY BLADDER WITH SOME ASSOCIATED CLINICAL AND PATHOLOGICAL CONDITIONS, ILLUSTRATED BY PYELOGRAMS.

M. MOLONY.

What is a Diverticula, the etiology of diverticula, true and false diverticula, the important role diverticula play in their progress of destruction not of one kidney alone but it may be of both kidneys.

Radiograms illustrating a variety of phases in the pathological history of these conditions from (a) early obstruction and atony of the ureter to hydronephrosis atrophy and death of the kidney; (b) from early infection and interference with the ureter to dilatation pyonephrosis, perinephritis, pyelonephritis and death of the patient.

The clinical history of cases showing the marked intermittancy of symptoms, the long intervals of apparent immunity from any serious trouble in the different stages during which the kidney is being quietly destroyed.

2. EXPERIMENTAL RENAL INFECTION CARRIERS.

KARL FREDERICK MEYER.
FRANK HINMAN.

Experiments to produce typhoid renal carriers in rabbits by various methods will be described.

The discussion of the results will permit of some consideration of the pathogenesis of pyelonephritis and allied renal infections due to bacteria of the colon typhoid group.

3. ACUTE AND SUB-ACUTE UNILATERAL INFECTIOUS SUGICAL NEPHRITIS WITHOUT PYURIA FROM THE AFFECTED SIDE.

ROBERT V. DAY.

Report of three cases with post-operative pathological study.

Report of a case of gonorrheal pyelo-nephritis.

Discussion opened by FRANK HINMAN.

4. FOCAL RENAL INFECTIONS.

LEON JOSEPH ROTH.

Report based on cases showing certain similar constitutional symptoms and wide variance regarding local manifestations and end results. Purpose of report to demonstrate uncertainty regarding course of infection, pathology and terminology. Severity of actual bacillary infection not parallel to symptoms or local and general manifestations.

Case histories. Pyelograms. Specimen.

NEUROLOGIC SECTION

Wednesday, April 17

2:00 o'clock.

1. PROGNOSIS AND TREATMENT OF CENTRAL NERVOUS SYSTEM SYPHILIS.

R. W. HARVEY.

Nervous system involvement frequently due to:
- Insufficient treatment in primary stages.
- Erratic treatment.
- Patient's indifference.
- Economic factors.

Involvement may follow rapidly on initial stage in spite of vigorous treatment.

Importance of frequent clinical examinations:
- "Rheumatism," nervousness, lassitude, incontinence, stomach trouble.

Importance of frequent laboratory tests:
- Wassermann test.
- Spinal fluid examination.

Special spinal fluid tests in central nervous system involvement:
- Lange's colloidal gold.
- Mastic test.

The Wassermann test as an aid in treatment.

The treatment of general paresis:
- Usual clinical history in early cases.
- Results of clinical examinations.
- The special spinal fluid tests.
- Treatment and results.

Treatment of Tabes and cerebro-spinal lues:
- Usual clinical history and examinations.
- Spinal fluid tests.
- Treatment and results.

Other forms of nerve syphilis, examinations and results of treatment.

Status of intraspinal therapy:
- Swift-Ellis and Byrne methods.
- Laboratory control of this form of treatment.
- Its administration to be specialized by trained men with laboratory facilities.

Conclusions:
- Vigorous and prolonged treatment of every case of syphilis the best guarantee against involvement of the nervous system.
- Value of clinics in treatment of syphilis.
- Co-operation of State laboratories with physicians in making examinations.

2. THE PASSAGE OF DRUGS FROM BLOOD SERUM TO SPINAL FLUID (projectoscope).

H. G. MEHRTENS.

I. In normal states of choroid:
   1. Choroid practically impermeable excepting for few substances, such as urotropin.
      (a) Anti-bodies may not pass either way, e. g. Wassermann reaction.
         1. Virus of infection may not pass barrier.

II. In abnormal states of the choroid:
   1. In meninges, drugs such as bromides, salicylates, uramin may permeate.
   2. Experimentally—choroid upset by drainage of Spinal Fluid, injection of serum, human or horse—salines.
   3. Potassium iodid will pass from serum to Spinal Fluid only when horse serum has been previously injected into the spine and causing ascptic meninges. Arsenic is being treated in the same way.

III. Conclusions:
   1. In diseases of meninges, extensive intravenous therapy is of advantage as certain proportions of drugs will pass the damaged choroid.
   2. Certain drugs, including Sodium iodide, may be caused to pass from the blood to the Spinal Fluid in appreciable quantities by damaged choroid in injecting horse serum into spine.
   3. The present therapeutic methods, such as Swift Ellis treatment and drainage, probably depend upon the same principles.
   4. To get best results it would seem reasonable to reverse Swift Ellis treatment and give the serum intraspinously before the Salvarsan is injected.

Discussion opened by WALTER F. SCHALLER.

3. PERSONAL EXPERIENCES WITH THE MENTAL RATING TESTS IN ADULT NEUROLOGICAL CASES—WITH CASE REPORTS.

ARTHUR RITTER.

Importance of differentiating dements and aments.

Experiences in epilepsy, the feeble-minded, brain tumors and paresis—Diagnostic significance—Discussion of the possibility of localizing brain lesions by psychologic examinations—Mutism without deafness—Brain lesions without mental symptoms.

Outlines of tests used.

4. SPINAL FLUID FINDINGS IN HERPES ZOSTER.

W. F. SCHALLER.

The results of cerebro-spinal fluid findings in 21 cases of Herpes Zoster are discussed with especial reference to etiology.

The most important theories of causation are briefly reviewed.

Discussion opened by Norbert J. Gottbrath.

5. CEREBRAL OEDEMA IN CRANIAL TRAUMA.

A. S. LOBINGIER.

Synopsis:

The increasing number of injuries to the brain from motor accidents should inspire a keener analysis of the pathology of the brain and meninges in these injuries.

Oedema is consequent from concussion as well as contusion, and is in no sense secondary in importance to hemorrhage in intracranial tension.

The relation of blood pressure, fluid tension in the spinal canal and papillodema to cerebral oedema.

Destructive changes occur if oedema is not promptly relieved by decompressive measures.

The approved methods of surgical relief.

6. THE TREATMENT OF EPILEPSY.

M. B. LENNON.

Observations derived from 200 cases. Etiology. Mental make-up of epileptic. Luminal treatment—Observations on its use in 110 patients.

Discussion opened by RICHARD HARVEY.

PROGRAM, EYE, EAR, NOSE AND THROAT SECTION

Tuesday Afternoon, April 16

2:00 o'clock.

Symposium on Relation between Pathologic Brain Conditions and Eye, Nose and Throat.

1. OPHTHALMOLOGIC ASPECT.

WM. F. BLAKE.

OPHTHALMOLOGY AND INTRACRANIAL TROUBLE

Investigation of eyes in such cases should include: study of fundus, ocular palsies, loss of conjugate movements, papillary disturbances, corneal reflex, nystagmus, changes in visual fields and in threshold light perception, optic aphasia.

Importance of these symptoms as an aid in any intracranial localization study, value of observed eye symptoms as aid in prognosis and as index of progression or retrogression of cranial lesion. Eye condition may frequently decide question as to advisability of palliative surgery either in presence or absence of definite localization.

2. OTO-LARYNGOLOGIC ASPECT.

H. B. GRAHAM.

The Relation between the Labyrinth and the central nervous system will be reviewed with special attention to the physiology, and the pathology of the region will be illustrated by typical cases.

3. NEUROLOGIC ASPECT. (Lantern.)

W. F. SCHALLER.

General considerations and experiences in thirty cases of Brain Tumor—Nature of growths—Rarity of Gumma—General and Local Symptomatology—Mental Symptoms—Advisability of Lumbar Puncture as a Diagnostic Aid—Value of X-Ray Examinations—Diagnosis and differential Diagnosis—Uremia—Syphilis—Serous Meningitis—Meningismus—Results of Treatments—Illustrative Cases.

4. SURGICAL ASPECT.

EMMET RIXFORD.

5. INTRACRANIAL COMPLICATIONS OF DISEASES OF THE EAR, NOSE AND THROAT.

HILL HASTINGS.

No attempt has been made in this paper to review the commonly known intracranial complications. Attention is directed to some of the uncommon conditions of the ear, nose and throat that may cause intracranial trouble.

Ear Cases.

No. 1. A report of a case of caries of petrous pyra-

mid; the result of chronic middle ear suppuration; death from meningitis; autopsy.

No. 2. A case of tempero-sphenoidal brain abscess from acute middle ear suppuration successfully operated with apparent recovery, followed by secondary sub-dural brain abscess at the vertex; autopsy findings.

No. 3. A case of extra-dural abscess from middle ear suppuration, left side, with involvement of the speech centre; slight delirium, operation, drainage of extra-dural abscess; recovery without any brain exploration.

Nose and Throat Cases.

Suppuration of the accessory sinuses. Intraeranial complications in untreated cases are comparatively rare. On the other hand, intracranial complications as the result of radical operations, in proportion to the number of cases so operated, are much more common. Passing of the era in which American surgeons were led astray by over-enthusiasm for the radical (supposedly efficient) surgery advanced principally by the German and Austrian nose and throat surgeons. The number of deaths recorded in literature. Many deaths not reported. The writer reports three fatal cases seen in consultation, death apparently due to radical ethmoid operation. Radical ethmoid surgery without existing complications not free from danger to life. A report of five cases of sarcoma of the sphenoid region; autopsy in two cases where intracranial complications were the cause of death. One case, meningitis from secondary suppuration; in the second case death from softening of the whole right side of cerebrum, due to pressure of the tumor on the cerebral vessels. The early signs of sarcoma of the sphenoid region were seen in the naso-pharynx; the earliest symptoms complained of being deafness and pain in the ear.

Wednesday Morning, April 17

9:00 o'clock

1. TONSILLECTOMY IN SYSTEMIC DISEASES.

J. A. BACHER.

Fibrositis and Tonsillectomy.

This paper will have as its nucleus a statistical study of the effects of tonsilleetomy in cases of fibrositis, nephritis and endocarditis in patients in the Leland Stanford Junior Medical School clinics the past five years.

As an introduction the etiology of fibrositis will be reviewed. Neuritis and neuralgia are terms that are used with considerable uncertainty and they will be differentiated. Conclusions will be deduced as to the indications for tonsillectomy.

2. REPORT OF UNIQUE EYE CASES.

V. HULEN.

1. Divergent strabismus with vicarious fovea.
2. Young child with perfect vision and fusion, not cured by glasses.
3. Young ehild with poor vision one eye, cured by glasses.
4. Extreme Squint, voluntary fixation either eye cured by operation.
5. Exophoria not relieved by double tenotomy and double tucking under ether anesthesia.
6. Spontaneous external ocular hemorrhage in young healthy student.
7. Operated Exostosis Orbit.
8. Sarcoma of conjunctiva "cured."
9. Extensive monocular choroidal changes in father and daughter, same pictures, different causes.
10. Tubular field and normal vision in simple glaucoma.
11. Glaueoma, poor vision greatly improved by double trephining.
12. Glaucoma, long duration, 20/200 vision restored to 20/20 in 24 hrs. by eserine alone.
13. Single, vertical gunshot destroyed both eyes.
14. Loss of vision of both eyes eventually, following Cataract operations in diabetic subject.
15. Recovery of vision in cataract case without surgical or medical treatment.
16. Monocular, extreme Electric Ophthalmia.

3. EYE QUALIFICATIONS FOR AVIATION CORPS.

W. S. FRANKLIN.

Necessity for careful examination of muscles; acuity of vision; color sense and stereoscopic vision, minimum requirements and leeway allowable. Analysis of results obtained in the examination of numerous candidates.

4. TRAINING OF FIXATION AND FUSION IN STRABISMUS.

K. PISCHEL.

An operation will often be prevented or if found necessary better results will be insured by the improvement of sight of the squinting eye and by the increase of the fusion power.

5. EAR TESTING BY BARANY METHOD.

F. A. BURTON.

Short history of this work.

My impressions in labyrinthine testing in Vienna and before going and after returning.

Brief consideration of labyrinthine anatomy and physiology.

Practical value to general practitioner, internist, surgeon, neurologist, ophthalmologist, as well as otologist.

Understanding of the work often essential in differential diagnosis.

Increasing usefulness of the tests is certain as they become more generally understood.

It behooves every otologist to qualify. By too many physicians labyrinthine testing is considered beyond human understanding.

An effort is made to present the subject in a clear and concise manner, without going extensively into border-line cases; to make practicable, time saving, to simplify.

All doing this work should watch their technic, be careful, thorough, and remember there is seldom labyrinthine pathology but often faulty technic.

Description of improvised turning chair.

Wednesday Afternoon, April 17

2:00 o'clock

1. CLINICAL RESULTS FOLLOWING PROPHYLACTIC TREATMENT WITH SILVER NITRATE FOR BLENNORRHEA NEONATORUM.

A. B. SPALDING.

A brief review of the results obtained with Silver Nitrate, 2% and Silver Nitrate, 1% instilled into the eyes of the new-born.

Fifteen hundred case histories of babies born in the Obstetrical Ward at Lane Hospital, Women's Clinic Service of the Stanford University School of Medicine.

Importance of good technic to be sure that Silver Nitrate Solutions actually enter the conjunctival sack.

The cases of Silver Nitrate and mild conjunctivitis cases will be discussed in detail.

No case of severe eye infection has been encountered in this series.

Several case reports of severe eye infection encountered in the Outpatient Service will be discussed in detail. The results obtained with Silver Nitrate 2%, in a series of fifteen hundred home confinements will be compared with the hospital series.

2. NASAL REFRACTURE.

L. L. STANLEY.

Of 2000 San Quentin prisoners examined on entrance 15% had deflected septa, and 11% deformed noses.

Deformities largely due to improperly set nasal fracture, caused by violence. To repair deformity, it is necessary to refracture bones of nose. Accomplished by applying sufficient force to convex side of nose with buffer and mallet. Nitreous oxide or ether rausch used as anesthetic. After refracture, nose easily restored to normal shape, and retained by intranasal and extranasal plaster cast.

As records of case, pictures are taken, and death masks before and after operations are made.

3. TREATMENT OF DIPHTHERIA CARRIER WITH ESPECIAL REFERENCE TO TONSILLECTOMY.

F. E. DETLING.

Treatment of the Diphtheria Carrier with special reference to Tonsillectomy.

Definition of Diphtheria Carrier. Various forms of treatment, classified under 1—biological products; 2—chemical products; 3—mechanical. Brief report of a series of cases.

Thursday Morning, April 18

9:00 o'clock

1. GRANULOMA OF THE LARYNX.

MACKENZIE BROWN.

Report of case following injury. Removal by direct method, recurrence and removal twelve times by indirect method. Recovery.

Discussion opened by H. A. KIEFER.

2. A REPORT OF TWO CASES OF SARCOMA OF THE CHOROID.

B. F. CHURCH.

Special attention called to the similarity of symptoms, in the early stages of sarcoma of the choroid, to simple detachment of the retina and acute glaucoma. Importance of early diagnosis. Theories of simple detachment of the retina and its relation to neoplasms. Report of two cases of sarcoma of the choroid.

3. DRUGS IN RELATION TO EAR, NOSE AND THROAT TREATMENT.

H. Y. McNAUGHT.

In the early days of Rhinology and Oto-laryngology, the treatment of diseases of ear, nose and throat was largely by drugs. With increase in knowledge of the causation and treatment of these conditions, the uselessness of much of the treatment by medication has been realized, till now by far the greatest place in treatment falls to surgery.

However, our text-books unfortunately still perpetuate in many cases these exploded ideas of therapy, as do also a large number of practitioners.

Our own specialty is not entirely guiltless and it is to voice a protest against such useless and often harmful treatment that this paper is presented and at the same time make mention of those drugs which we now accept as of use.

MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

J. H. BARBAT, San Francisco, President
W. W. RICHARDSON, Los Angeles, 1st Vice-Pres. MORTON R. GIBBONS, San Francisco, 2d Vice-Pres.
SAXTON TEMPLE POPE, San Francisco, Secretary

COUNCILORS

C. G. KENYON, San Francisco, Chairman (6th District. Term expires 1919)
T. C. EDWARDS, Salinas (3d District. Term expires 1918)
E. N. EWER, Oakland (7th District. Term expires 1920)
A. W. HOISHOLT, Napa (9th District. Term expires 1920)
P. T. PHILLIPS, Santa Cruz (5th District. Term expires 1920)
E. C. MOORE, Los Angeles (2d District. Term expires 1919)
GEORGE H. AIKEN, Fresno (4th District. Term expires 1918)
JAS. H. PARKINSON, Sacramento (8th District. Term expires 1919)
RENÉ BINE, San Francisco (At Large. Term expires 1920)
O. D. HAMLIN, Oakland (At Large. Term expires 1919)
H. A. L. RYFKOGEL, San Francisco (At Large. Term expires 1918)
GEO. H. KRESS, Los Angeles (At Large. Term expires 1920)
J. C. YATES, San Diego (At Large. Term expires 1920)
G. G. MOSELEY, Redlands (At Large. Term expires 1920)
C. VAN ZWALENBURG, Riverside (1st District. Term expires 1918)

PERSONNEL OF THE HOUSE OF DELEGATES.

DELEGATES.	ALTERNATES.
Alameda.	
L. P. Adams (1)	W. A. Clark (1)
E. E. Brinckerhoff (1)	Dudley Smith (1)
A. S. Kelly (2)	A. M. Smith (2)
G. G. Reinle (2)	R. T. Stratton (2)
Butte.	
E. E. Baumeister (2)	D. H. Moulton (2)
Contra Costa.	
Fresno.	
J. R. Walker (1)	W. T. Barr (1)
W. W. Cross (2)	
Glenn.	
Humboldt.	
L. P. Dorais (1)	
Imperial.	
Kern.	
F. J. Gundry (1)	J. P. Hull (2)
F. A. Hamlin (2)	T. W. McNamara (1)
Lassen-Plumas.	
Los Angeles.	
(Names to appear on Official Program.)	
Marin.	
John H. Kuser (1)	A. H. Mays (1)
	L. L. Stanley (1)
Mendocino.	
Oswald H. Beckman (1)	
Merced.	
Monterey.	
Martin McAulay (1)	H. C. Murphy (1)
Napa.	
Orange.	
H. A. Johnston (2)	J. L. Maroon (2)
H. M. Robertson (2)	I. P. Boyd (2)
Placer.	
E. E. Ostrom (1)	H. N. Miner (1)
Riverside.	
J. C. King (2)	L. M. Ryan (2)
H. R. Martin (1)	A. W. Walker (1)
San Benito.	
San Bernardino.	
D. C. Strong (1)	C. L. Curtis (1)
B. F. Church (1)	P. M. Savage (1)
San Francisco.	
H. E. Alderson (1)	J. H. Graves (1)
P. K. Brown (1)	H. C. Moffitt (1)
F. B. Carpenter (1)	Emmett Rixford (1)
W. B. Coffey (1)	A. B. Spalding (1)
G. E. Ebright (1)	A. J. Zobel (1)
H. W. Gibbons (1)	V. G. Vecki (1)
W. C. Alvarez (2)	Frank Hinman (2)
W. W. Boardman (2)	H. C. McClenahan (2)
Leo. Eloesser (2)	Howard Morrow (2)
G. H. Evans (2)	Wm. Ophüls (2)
W. S. Franklin (2)	R. K. Smith (2)
H. P. Hill (2)	W. I. Terry (2)
San Luis Obispo.	
G. L. Sobey (1)	Ralph O. Dresser (1)
San Mateo.	
J. L. Ross (1)	F. H. Smith (1)
Sacramento.	
J. W. James (1)	Y. J. Cox (1)
S. E. Simmons (1)	W. K. Lindsay (1)
C. B. Jones (1)	W. A. Beattie (1)
San Diego.	
H. P. Newman (1)	E. H. Crabtree (1)
Robert Pollock (1)	J. E. Jennison (1)
T. O. Burger (2)	C. M. Hosmer (1)
John C. Yates (2)	F. A. Burton (1)
San Joaquin.	
C. R. Harry (1)	D. R. Powell (1)
B. J. Powell (2)	W. J. Young (2)
Margaret Smyth (2)	J. D. Dameron (2)
Santa Barbara.	
George R. Luton (2)	L. R. Ryan (2)
Santa Clara.	
Edward Newell (1)	P. A. Jordan (1)
Bert E. Loehr (1)	Wm. Simpson (1)
	C. G. Wilson (1)
Santa Cruz.	
P. T. Phillips (1)	H. E. Piper (1)
Shasta.	
F. Stabel (1)	C. E. Reed (1)
Siskiyou.	
Solano.	
Sonoma.	
M. B. McAuley	F. O. Pryor
J. W. Scamell	J. H. McLeod
Stanislaus.	
P. N. Jacobsen (1)	B. F. Surryhne (1)
Tehama.	
Tulare.	
W. W. Tourtillott (1)	T. D. Blodgett (1)
Tuolumne.	
Ventura.	
Yolo.	
W. E. Bates (2)	M. W. Ward (2)
Yuba-Sutter.	

NOTICE.

The following Counties have not reported their delegates nor alternates for the coming State meeting to be held at Del Monte, April 16, 17 and 18: Contra Costa, Glenn, Imperial, Lassen-Plumas, Merced, Napa, San Benito, Siskiyou, Solano, Tehama, Tuolumne, Ventura, Yuba-Sutter.

(Continued from Page 184.)

or to refractive error, are usually physically more backward than those with normal eyes. They form a group distinguished by being shorter, thinner, sallower and less active physically than their companions. Exceptions of course occur frequently.

To close—thorough ocular examination of mentally retarded children should never be omitted. A small number will be remarkably improved by proper glasses. In those not amenable to ocular improvement, we obtain by this examination, from the social and economic standpoint, an index of what kind of work in the future as far as their vision is a factor, they may be expected to do, and educate them accordingly.

CONGENITAL OCCLUSION OF THE CHOANAE OF THE NOSE.*

H. Y. McNAUGHT, M. D., San Francisco.

Congenital occlusion of the choanae of the nose has been recognized since the year 1830, when the condition was seen post mortem by Otto. It was later first reported as seen in the living by Emmert in 1854. Up to 1904 Schmielglow had collected sixty-four cases from the literature and in this series it was shown that more women than men were affected and that when the condition was unilateral, occurred more on the right than left side. Although so far, only about one hundred cases have been reported, there are reasons for believing that they are of more frequent occurrence than generally supposed.

One reason for this belief is that cases of unilateral occlusion have been discovered during examination of patients who were unaware of its existence or who suffered so little inconvenience that they had never sought relief for it. Another reason is that certain cases of supposed asphyxia neonatorum have been observed in which such occlusion has been the cause. Such a case was reported by Richardson in 1914. It is only too possible that many such cases have been classed as asphyxia neonatorum in the past. The causative factor is, of course, some departure from the normal embryological development.

It may not be amiss here to briefly review the development of part under discussion. "The primitive nasal capsule develops as a part of the primordial cranium. From that part which extends forward beyond the anterior portion of the notochord a core is formed for the frontonasal process—a relatively broad mass of tissue separating the nasal pits. The nasal pits are symmetric depressions, at first pyriform in outline, with the small ends toward the primitive mouth cavity. As the processus globularis on the lateral portion of the medial nasal process approximates the lateral nasal and maxillary processes, there is a deepening of the primitive nasal fossae and a change in their form, which becomes oval and bordered by broad folds. The broad median process separating the depressions later becomes narrowed and forms the septum nasi. By the approximation of the nasal processes inferiorly, their ectodermal coverings are brought into contact. The intervening ectoderm is resorbed, and the processes become united by mesoderm, which forms the floor of the primitive anterior nares. In the fifth week, or shortly thereafter, by the partial resorption of ectodermal cells filling the remaining interspaces between the median and lateral nasal processes, there is formed behind the os intermaxillare the primitive ductus nasopharyngeus. Posteriorly, there persist for a short while the membranae bucconasales, which break through and form the primitive choanae at a time somewhere between the twenty-eighth and fortieth day—the observations of the different embryologists varying to that extent."

Now a failure of absorption of this membranae bucconasalis would result in membranous occlusion and it is conceivable that bone deposits might ultimately change the character of this barrier.

Hocheim believed the growth arose from the palate bone. Luska believes it occurs from the upward and backward growth of the horizontal plate of the palate bone. Kundrat, to an ingrowth of the vertical plates of the palate bone. The condition may be either uni or bilateral and the septa complete or only partial.

The symptomatology differs, of course, with the degree of obstruction. In adults with both sides completely occluded, the chief symptom is nasal obstruction. Headache may be complained of and a nasal voice is noticeable. Deafness in some degree usually results and anasmia exists in all cases. When only one side is occluded the patient may not know he has any obstruction to breathing. The secretions of the nose cannot be expelled and are found to be of a peculiarly gelatinous character and may irriate the lip and alae. A symptom mentioned by one author is that when the patient cries the tears run out of the nose. However, these diagnostic signs are all secondary to that of direct inspection and are not pathognomonic of this type of obstruction.

In asphyxia in infants due to this cause the symptomatology is important, as here inspection is difficult or impossible. Richardson has described such a case. He says that a child born with complete nasal occlusion will not be able to breathe, as mouth-breathing is an acquired habit, so the child becomes cyanotic and cries. This crying relieves the cyanosis. The cyanosis being relieved, the child stops crying and soon becomes cyanotic again. In the diagnosis of the condition in new born he suggests the use of the probe and also filling the naris with solution which should run back into naso-pharynx, if no other obstruction exists. So that where we see this cycle in the new born we should think at once of nasal occlusion. The treatment of this condition in children consists in keeping the mouth open and the tongue pulled forward till surgical relief can be secured.

In adults the operative efforts have all been directed towards destroying the obstruction and afterwards keeping the choanae open. They have all been of the same type and have all had to cope with the obliteration of the opening by granulation tissue, which occurs with great rapidity in this space. Katz suggested burring out the plate and also removing part of the posterior end

* Read before the Forty-sixth Annual Meeting of the Medical Society, State of California, Coronado, April, 1917.

of the vomer. It appears that Uffenord first suggested the submucous removal and use of the membrane over anterior surface of the obstruction.

In April, 1915, Thomasson reported a case of unilateral bony occlusion operated by a submucous route. The chief feature of his operation was the formation of a mucous membrane flap to cover the wound in the floor. It, however, left three bare, bony surfaces to granulate and, moreover, is impossible of performance in such a case as the one I am to describe.

In January, 1915, a woman aged 35, presented herself at the Nose and Throat clinic of Stanford University, Medical Department. She complained only of deafness in the right ear and of some discharge for the last two months from the right nostril. Examination: Ear-catarrhal otitis media chr. Right ear. Nose—left side normal; right side full of muco-purulent material of a peculiar gelatinous consistency which she was unable to expel. By mirror post-nasally was seen a complete obstruction of the right choana which, on probing, was found to be hard. This extended from the floor to the sphenoid, and from the posterior end of the vomer to the lateral wall. Pus was seen under the middle turbinate after wiping the naris clean. In view of the history of a pneumonia two months before, and this discharge having supervened, I probe-punctured the right antrum and aspirated some pus which was cultured and the chief organism found to be the pneumococcus. What was the source of infection here since the closure of the choana prescribed the air as carrier?

Not having, at that time, seen any operation described except oblation of the obstruction, I thought of approaching it by the septal route, raising the mucosa from the anterior face of the obstruction and using the flap thus obtained to cover the bony wound in the floor and roof by splitting it transversely. The procedure was very easily carried out so far as the removal of the septum submucously and the dissection of my flap from the face of the obstruction. I found, however, that the removal of the bony wall was very difficult, owing to its thickness and the abnormal lowness of the sphenoid. Chiseling was difficult for the same reasons and also on account of the proximity of the Eustachian tube. Necessity forced the next step of the operation which was, in brief, to short circuit the air by removing a portion of the posterior end of the septum itself. This was done with a Wagner's forward-biting antrum punch, though other instruments could be used for that purpose. The opening thus made was adequate, has remained free, and has required no attention since.

The advantage of such an opening is that it has a tendency to enlarge up to a certain point and will not close in by granulations. While it is advisable to bite or drill out as much of the obstruction as possible, the essential part of the operation, after removal of the septal bone, is the formation of a new choana, as it were, by the removal of a portion of the posterior end of the septum. This simply shortens the length of the septal base. The illustration will make further description unnecessary.

One other point about this case may be of interest. On being tested by some of the essential oils, as to her sense of smell on the right side, after an opening had been established, it was found that she could detect the odor at once on inhalation; olfactory nerves were developed, although never used.

KIDNEY INFECTIONS IN WOMEN.*

By WILLIAM E. STEVENS, M. D., San Francisco.

Anatomical differences in the female pelvic organs, as well as the physiological changes and the frequent pathological conditions associated with pregnancy and the puerperium, are factors of importance both in the etiology and treatment of renal infections. The shortness of the urethra, together with its closer proximity to the vagina and rectum, has a direct bearing upon the much greater frequency of colon bacillus infections in women, and when we consider that the majority of infections of the upper urinary tract are due to the latter organism, the importance of sex in relation to pathological conditions of the kidney is obvious. Likewise the intimate relationship existing between the venous and lymphatic plexuses of the female sexual and urinary organs is a factor of much significance.

The routes of infection are hematogenous, lymphogenous through the inter-communicating lymphatics of the kidney, ureter, bladder, pelvic organs and colon and by direct extension upward from the lower urinary tract. The hematogenous and lymphatic routes have been repeatedly demonstrated, while the fact of the far greater prevalence of these conditions in females in whom the urethra, vagina and rectum are in such close proximity lends support to the theory of direct infection.

Regardless of the manner in which bacteria gain access to the pelvis of the kidney, obstruction to the outflow of urine, traumatism or lowered resistance from some cause must be present in order that pathological conditions develop. Bacilli are constantly passing through the kidney and the urethral orifice is often bathed in purulent secretions without the development of renal lesions or urethritis. Strictures, distortions of the ureter due to displacement of the uterus and extraureteral pressure favor stasis and consequent infection. Stones in the kidney producing both obstruction and trauma lead to a similar result.

Infections of the upper urinary tract are probably always secondary, the primary focus being found in the intestinal tract in infections due to the colon bacillus, in the lungs when the tubercle bacillus is responsible and in the lower urinary tract, tonsils, ears, teeth or skin when the cocci are the offending organisms.

The majority of observers have found the colon bacillus first, the tubercle bacillus second and the coccus group last in order of frequency. In twenty-five of my own cases under recent obser-

* Read before the San Francisco County Medical Society, May 29, 1917.

vation the colon bacillus was present eleven times, the coccus eight, the tubercle bacillus two and a mixed infection of colon bacillus and coccus four times. The cocci are more frequently seen in acute conditions although less common than the colon bacilli.

Although later almost complete destruction of the kidney may occur from diffuse inflammation the lesions produced by the colon bacillus are at first limited to the pelvis and tubules and are consequently productive of much pus in the urine. They are responsible for the conditions known as pyelitis, pyelonephritis or diffuse inflammation of the kidney without abscess formation and pyonephrosis. The coccus group on the other hand exert their influence upon the cortex and subcortex and pus is often absent from the urine. Circumscribed abscesses as well as diffuse suppuration, perinephritis and perinephritic abscesses are due to these organisms. A mixed infection caused by a combination of the above groups may occur at times and is often most confusing.

From a consideration of these facts the conclusion is drawn that the diagnosis of kidney lesions is obviously incomplete without a correct determination of the infecting organism. This is accomplished by the cultural examination of fresh urine, a procedure which is often neglected even by the urologist. While some authorities go so far as to claim that the nature of the infection may be ascertained by means of functional kidney tests, my experience with the combined phenolsulphonephthalein, intravenous phloridzin and urea tests in a large number of estimations leads to the conclusion that this is not always true as the amount of destruction of kidney tissue accompanying any type of infection is an important factor in the resulting values.

There is also a tendency at the present time to classify all cases of pyelitis as pyelonephritis. While it is probably true that the infectious process is never entirely limited to the pelvis I think the latter term should be reserved for those cases exhibiting sufficient parenchymal involvement to produce a diminished renal function and the former used when normal functional values are found.

The treatment of colon bacillus infections consists first in the correction of associated pathological conditions, either primary or secondary, after which measures directed toward the destruction of the bacillus are in order. There are a number of groups of colon bacilli, the members of which exhibit differences in cultural characteristics and in virulence. Corresponding to these groups we see four types of infections varying in accordance with their resistance to treatment. The first type clears up after one or two ureteral catheterizations, probably through the relief of some slight obstruction. The second runs a course of from two to four weeks before recovery, while the third becomes chronic. The fourth type, an acute unilateral virulent infection is rapidly fatal without nephrectomy.

Drainage of the pelvis through the ureteral catheter, together with the proper adjustment of the reaction of the urine by the administration of drugs increasing or decreasing its acidity or alkalinity, following the recently advocated determination of the range of acid production of the bacillus, are of most value. Pelvic irrigations with one-half to one per cent. silver nitrate solutions and urinary antiseptics such as hexamethylenamin internally are also beneficial. The latter drug, however, is usually given in too small doses. As much as two grams may be given every four hours without deleterious effects. It is also to be remembered that urotropin is valueless in urine not decidedly acid, consequently frequent determinations should be made not only of the reaction of the urine but also for the presence of formaldehyde.

Nephrectomy is necessary in virulent unilateral hematogenous infections and in cases where other measures are of no avail and the patient is rapidly going down hill.

On account of the tendency to abscess formation and because of their location in the vicinity of the cortex precluding amenability to medical therapy the treatment of coccus infections is usually surgical. Whereas incision and drainage are usually sufficient in perinephritic abscess with little or no renal involvement, nephrectomy is the operation of choice where the latter condition exists. Partial nephrectomy, decapsulation and incision and drainage of kidney abscesses is seldom of permanent benefit although in cases of extensive bilateral abscess formation when the question arises as to the better kidney containing sufficient functionating tissue to preserve life the operation of partial nephrectomy is of value. A patient upon whom I performed a double partial nephrectomy five years ago because of a bilateral calculus pyonephrosis with extensive destruction of renal parenchyma is working twelve hours a day and apparently enjoying perfect health, although the urine from both kidneys contains numerous pus cells.

The treatment of tubercular infection of the kidneys is by nephrectomy except in the presence of more or less extensive bilateral involvement. Here careful tuberculin therapy together with appropriate general measures are occasionally of value.

The following cases present features of special interest:

Mrs. B., a married woman thirty-eight years of age, entered the hospital complaining of deafness, burning during urination and dryness of the mouth. Her illness had begun fourteen days previously with fever, chills particularly at night, nosebleed, diarrhoea and a sharp pain in the right lumbar region extending around to the abdomen and left breast. Seven days later urination became intensely painful and deafness appeared. A provisional diagnosis of typhoid fever was made by the intern and the patient placed in the contagious ward. Examination three days later revealed a large tender movable right kidney and on account of the uncertainty in diagnosis the ureters were catheterized for the purpose of obtaining urine for microscopical examination, culture and the performance of functional tests. The bladder walls, sphincter and ureteral orifices were normal. The intravenous phlorizin and phenolsulphonephthalein as well as the quantitative urea tests

showed equal values on both sides. Microscopically the urine from the right kidney showed numerous pus cells and from the left an occasional pus cell. Cultures from both urines showed colon bacilli. Radiographs were negative for calculi. Urotropin and acid sodium phosphate were given internally. Two and again three weeks later the pelves were lavaged with one half per cent. silver nitrate solution. Two days after the second lavage the general and local symptoms as well as her hearing had greatly improved. She was discharged four days later in apparently normal condition. The question of diagnosis was of interest in this case also the temporary deafness accompanying the infection. The cause of the latter symptom was not determined.

The next case, also one of colon bacillus infection, is illustrative of the chronic type:

Mrs. B., thirty-one years of age, the wife of a physician, complained of frequency of urination, pain in the left lumbar region, nausea and vomiting and cloudy urine. These symptoms recurred every five to ten days and lasted from six to twelve hours. The first attack appeared thirteen years ago and at that time recurred at intervals of three months. Four years ago, shortly after conception, the patient had a severe attack of three months' duration which improved under appropriate treatment. Repeated attempts at catheterizaiton of the left ureter were futile, the catheter meeting an obstruction, due to stricture, one and a half centimeters from the bladder. Chromoureteroscopy with indigo carmine injected intramuscularly showed the characteristic blue discoloration at the right ureteral orifice in six minutes but none appeared on the left side in one half hour. Microscopical and guinea-pig tests for tubercle bacilli were negative. Urine from the right kidney was normal. The bladder urine contained numerous pus cells due to colon bacillus infection.

Following an uneventful confinement three and a half years ago the patient was free from symptoms for several months but they returned with increasing frequency until at the present time the attacks occur at least once a week. She now also complains of occasional slight pains in the right lumbar region. An attempt to catheterize the left ureter with a fine-pointed catheter proving successful, comparative functional tests were instituted with the following results:

	Right Kidney	Left Kidney
	Phlorizin (intravenous injection)	
Appearance	5½ minutes	None in one-half hour
	Phenolsulphonephthalein	
Appearance	3 minutes	Faint trace in eleven minutes
Amount	15%	Very faint trace
	Urea	
	.003	None

Right Kidney	Left Kidney
Microscopical Examination	
A few small round epithelial cells	Large number of pus cells, single and in clumps
Culture	
Negative	Pure colon bacillus

Pyelography with thorium nitrate showed a large shadow in the left kidney region which was considered due to a pus sack replacing the kidney parenchyma, this diagnosis being apparently substantiated by the negative functional values. Exposure of the kidney, however, revealed an enormously dilated pelvis and upper ureter, but also a large amount of microscopically normal parenchyma. A number five catheter entered the bladder readily from above. In view of these findings an attempt to save the kidney was considered justifiable and a large drainage tube was inserted into the pelvis. Before closure of the wound the kidney was fixed in a position favorable to drainage by sutures through the capsule. The wound having healed the patient left the hospital in three weeks much improved. It is now possible to pass a number six catheter through which drainage and lavage of the pelvis is accomplished. The patient is free from subjective symptoms although the urine from the left kidney still contains pus cells and colon bacilli. Functional tests give the following results:

	Right Kidney	Left Kidney
	Phlorizin (intravenous injection)	
Appearance	5 minutes	20 minutes
Amount	1.0	Trace
	Phenolsulphonephthalein	
Appearance	3½ minutes	25 minutes
Amount	18%	Trace
	Urea	
	.002	.001

The next case is an example of tubercle bacillus infection, interesting from a diagnostic standpoint:

Mrs. G., a well-nourished woman forty-four years of age, complained of frequency of urination and pain in the right lumbar region radiating to the hypogastrium. The symptoms had begun one and a half years ago. Urine from the right kidney contained many pus cells, that from the left was negative. Functional tests showed equal values on both sides. Radiography disclosed two shadows in the right kidney region and pyelography revealed a moderate distension of the right renal pelvis. A diagnosis of nephrolithiasis was made. At operation no stones were found but two circumscribed cavities were present in the lower pole of the kidney. The pathologist reported chronic tuberculosis. Although excusable the mistake in this case could have been avoided if careful examination for tubercle bacilli had been made.

The following case of coccus infection is illustrative of that type in which nephrectomy is indicated:

Mrs. L., married, thirty-one years of age, complained of pain in the right hypochrondriac region. The present illness began two years ago at which time she fell down stairs striking on her right side. A slight persistent ache followed this accident. Two months later distinct pain appeared and she began to feel tired. The pain was severe at times compelling her to sit down. A year later she noticed a mass in the right side. For the last few months she has been obliged to urinate two or three times during the night. She has become much weaker recently and has been obliged to remain in bed for several days at a time.

Palpation revealed a tender movable mass the size of the palm of the hand in the right hypochondriac region. Cystoscopy was negative. The urine from the right kidney contained many pus cells and gram positive diplococci. Functional tests showed a marked decrease in value on this side. As no improvement resulted from conservative treatment and the patient was rapidly going down hill nephrectomy was considered advisable. Recovery was uneventful following operation. The pathologist reported diffuse inflammation due to gram positive diplococci.

The above cases illustrate the necessity of a careful examination of the upper urinary tract before the question of treatment is considered. This is possible only after considerable training in urological technique and an amount of time and patience seldom required by other lines of special medical work. Too much emphasis cannot be laid upon the necessity of ascertaining the nature of the organism responsible for the infection.

In New Haven, Bridgeport and other Connecticut towns milk delivered at the station is sold wholesale at 8 cents a quart. It retails as high as 15 cents a quart. In Waterbury, when the price was raised from 12 to 15 cents a quart the sale was so greatly reduced that the price has been dropped back to 14 cents.

BACKWARD DISPLACEMENT OF THE UTERUS.*

By THOS. O. BURGER, San Diego.

It may seem presumptuous to attempt to offer something new on retro-displacement of the uterus as so much has previously, and that recently, been said on the subject. Nevertheless I will offer a few ideas regarding the mechanic and orthopedic factors appertaining to treatment. Papers by Stumdorf, Dickerson, Noble, Goffe, and others, have in part furnished material for this paper.

Regarding the uterus as an organ suspended by ligaments, supported indirectly by the pelvic floor, and having its attachment principally at the cervix, leaving the fundus freely movable, we have much opportunity for normal variations as to location.

Should woman walk horizontally, or on all fours, there would be no need for this discussion. However she persists in assuming the upright position for about two-thirds of the twenty-four hours, and thus produces troubles that have closely proximated the social bug in furnishing livelihood for gynecologists.

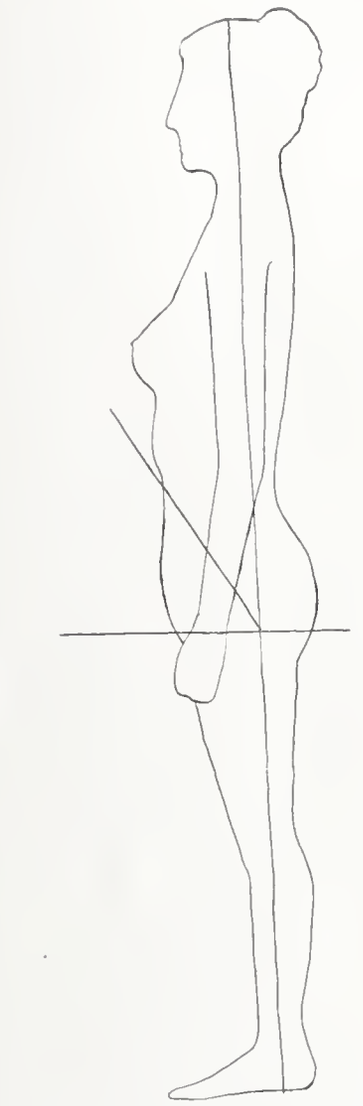
I have prepared charts to explain some of my ideas. You will observe from chart 1 that the angle of deflection of the abdominal cavity and its eddy, the pelvic cavity, is about 60°; also that a perpendicular or gravity line touching the promontory strikes the back of the symphysis.

Charts 2 and 3 show figures designated "Military" and "Slouch," which show by lines the variations of angulation of the two cavities, also the gravity lines.

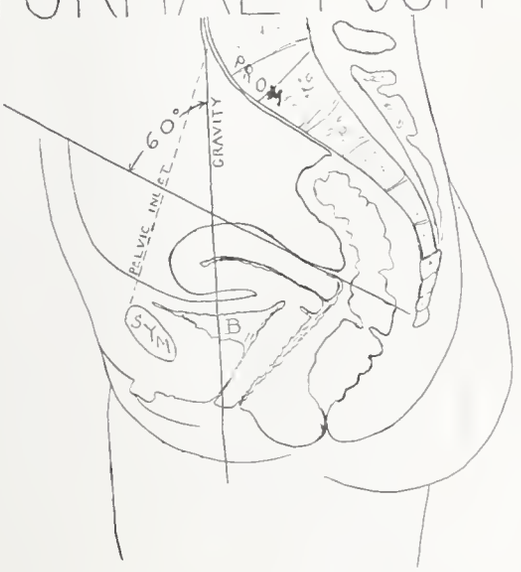
In the "Military," it is seen that the sacrum forms a roof to the pelvic cavity, while in the "Slouch," it is the rear wall. Now this has two distinct effects on the location of the fundus of the uterus. First, in that the utero-sacrals either suspend the cervix in the "Military," or pulls more decidedly backward in the "Slouch." Second, Intra-abdominal pressure is deflected in the "Military" but strikes almost directly into the pelvic in "Slouch." Obviously, if all other things are equal the "Slouch" will have the uterus forced into the inviting hollow of the sacrum by direct intra-abdominal pressure and be pulled back by ligaments. While in the "Military" the uterus will fall forward and what intra-abdominal pressure affects it will be spent on the rear of the fundus to hold it toward the bladder.

The guy ropes (round ligaments) are a decided factor in holding the fundus forward, so that the intra-abdominal pressure falls on the rear of fundus.

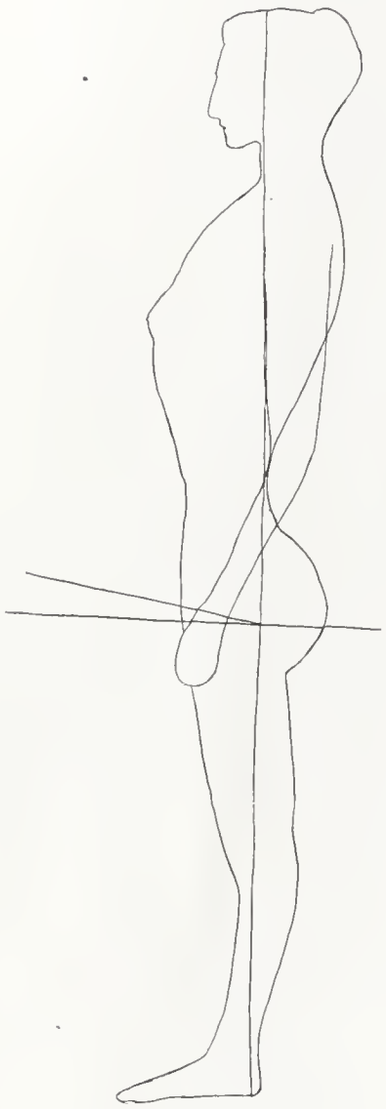
Resultant pathology from mal-position is often the condition for which treatment is sought and the backward displacement per se, may play a minor part in the symptom-complex. This pathol-



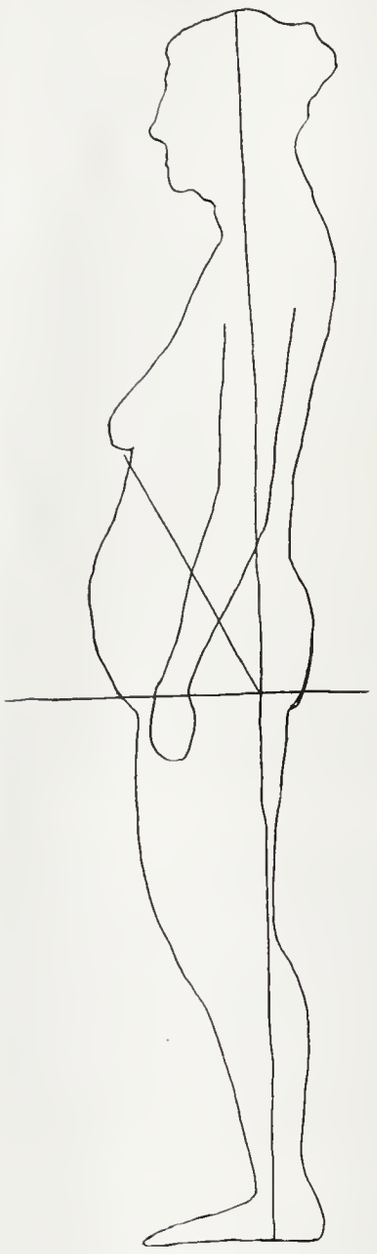
NORMAL POSITION



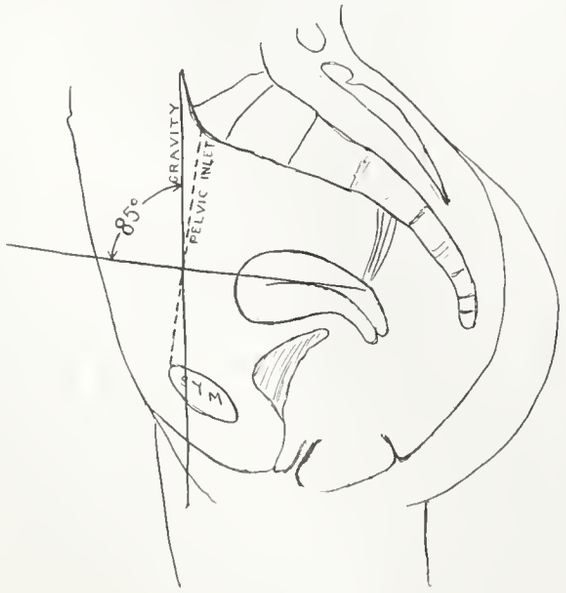
* Read before the Forty-sixth Annual Meeting of the Medical Society of the State of California, Coronado, April, 1917.

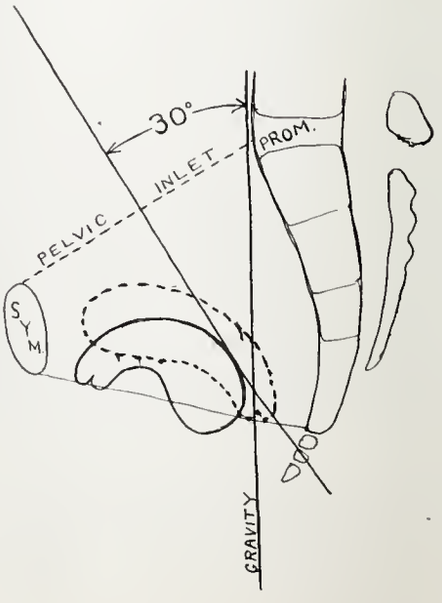


MILITARY



SLOUCH





ogy may therefore become the condition of first importance in the question of treatment, and the retro-displacement the secondary. When a backward displacement exists and symptoms seem to be due to this, especially if neurasthenia is a prominent symptom, the question as to whether surgery is indicated is a master problem. If no other disease can be found in the pelvis, we should make exhaustive study and consider long before we advise surgery, for the end results may be disappointing. If radical treatment is deemed necessary, I do not know of any operation in the whole domain of surgery where surgical judgment is of greater importance in wisely selecting the particular operation best suited to the individual case.

There was a time when the variety of pickles and of operations for retro-displacements were about numerically equal, but Mr. Heinz has been out-distanced in the race, as we have more than 100 variations of the operation for retro-displacement, and to be able to select the proper procedure is often of more value to the patient than to be able to perfectly execute a technique that is not applicable to the condition found. For example: If the cervix is held far to the front by a pronounced Goff ligament or congenitally located near pubes, and a Baldy-Webster only is done, we'd make bad matters worse by producing an anti-flexion, at the same time crowding the whole uterus over on the bladder. In such a case vaginal work may be necessary to let the cervix backward by cutting the ligament of Goff, and probably the utero-sacrals shortened to hold cervix back and then the fundus falls forward and is kept so by intra-abdominal pressure; or it may be necessary to do some round ligament shortening to tilt the fundus to the front. Another illustration: When the cervix is held well back and no pathology exists in the adnexa and simply bringing the fundus forward is the only need, I think the Baldy-Webster the most ideal procedure. There are other cases where Olshausen may be the ideal and therefore the best operation. Many things, however, should be considered and each case must be individualized from many standpoints to get a satisfactory result. Pages could be written in the discussion of factors governing the proper selection or variation of operations. However, we are impressed that surgery and surgery alone is not always the proper manner of dealing with this class of troubles.

The pessary which is becoming obsolete in Gynecology may have a place in this condition, especially in this orthopedic or improper skeletal poise. A Smith Hodge or some similar make may be properly fitted out and be found useful. I consider the pessary of value in that it fills the space in the hollow of sacrum that holds the fundus; it also pushes up the utero-sacrals, taking up their slack and in that way pulls the cervix back, making it easier for the fundus to tilt forward, thus allowing the intestines and intra-abdominal pressure to hold it forward. If the pessary is used temporarily during gymnastic exercises, along with a properly adjusted corset, and if it be subject to constant supervision, every effort being made to obtain a correct skeletal poise, we may get much benefit from its use and later dispense with it altogether. The principal object in all these cases should therefore be to secure a normal anatomic position within the pelvis; proper poise of the lower abdomen and pelvic planes, and to decrease the lower abdominal space and increase the upper abdominal area. In this way we are preventing general ptoses, of which backward uterine displacement is often only one of many.

Our main object in all these cases should be to secure and maintain normal anatomic relations of the pelvis and abdominal and pelvic contents.

The women who have congenital poor poise and bad placement of organs, also the women who from lack of attention to their position have failed to develop a proper normal anatomical corset, i. e., a good firm anterior wall, are the ones that have this condition. We must *reform* them and must see that they develop enough muscle tone and correct skeletal poise to prevent the ptosis and backache and neurasthemia that most of these women come to us for. It requires a master effort not to operate and then let the other doctor have the patient back to do with as he may. It may be necessary to put these women to bed and in the Trendelenberg position at first to get the abdominal contents into upper abdomen and while in bed assist the development of good abdominal wall tone by proper exercises, also put on some fat which will help to deflect intra-abdominal pressure and form a shelf to support the kidneys and other abdominal contents. The knee-chest, or easier, swinging the body from the thighs in prone position, relaxing and expanding the upper abdomen and then contracting the lower abdominal wall to develop better tone and also push up the contents. After the period of rest and treatment in bed, when it is necessary, the patient should be properly and comfortably fitted with some mechanical supports, such as braces, binders or scientifically adjusted corsets; she should be under constant supervision for a long period of time, faithfully instructed as to exercises and proper posture, emphasizing the importance of not stooping or slouching, thus preventing attitudinal strain.

The mere fact that more than 100 operations have been used for retro-displacement, brands operative treatment alone as not being successful, just as in drug therapeutics where we have a dozen remedies for one condition where drugs are not needed, as the old time dispenser believed.

But I do want to impress that gynecology does not have its limitations in what is accessible through the vagina or a four inch incision. We must and do consider what is in the pelvis, the pelvis itself, the abdominal organs, skeleton, internal secretions and, in fact, the entire woman with all the peculiarities her sex certainly produces.

The orthopedist, gastro-intestinal specialist and the gynecologist will often do well to combine their efforts on these women whose lives are miserable from the ligamentous strain, abdominal organ ptosis and the knowledge that they have "falling of the womb." Can we refrain from doing an easy, apparently harmless operation to satisfy their minds only?

PRE-OPERATIVE INVESTIGATION BY GROUP STUDY SUGGESTED AS A METHOD FOR THE LOWERING OF SURGICAL FATALITIES.*

By FAYETTE WATT BIRTCH, M. D.,
San Francisco, Cal.

In this discussion of surgical fatalities, emergency operations will be omitted and the consideration will be confined to the deaths following operations for chronic pathologic conditions. An attempt will be made to show the responsibility the surgeon must assume in these deaths; to call attention to the defects in American surgery; and to point out how some of our present day fatalities may be avoided.

The study of surgical risks by calculating only the percentage of deaths is often misleading. Surgeons in this method of study are the diagnosticians, operators and statisticians. They are, in fact, the judge and the jury. This is incompatible with unbiased judgment. If the records of the fatal cases were compiled by a disinterested party, and the causes of death determined in each, a reliable classification of the surgeons' errors might then be made. At present, however, few such lists are available. One would expect to find such a list in the Mortality Statistics of the Census Bureau, but such is not the case. The Clinical Congress of Surgeons of North America in 1914 took a step in this direction when it appointed a committee to standardize hospitals, with Dr. E. A. Codman as chairman. Few hospitals have made an effort to fulfill the requirements of that committee. Three Boston hospitals should receive favorable comment in this regard, the Peter Bent Brigham, the Codman and the Massachusetts General. These hospitals publish a résumé of the surgical fatalities and the causes of death in the annual reports. Any of these reports might be valuable in this discussion but, since the Massachusetts General Hospital is a general hospital and one of the oldest in America, standing high in the esteem of the profession, and having capable, honest men who are constantly struggling for better medicine, its report has been chosen to demonstrate the surgeon's responsibility in these deaths. In 1914-15, this hospital reported three hundred and twenty-five operative fatalities. This paper sets aside one hundred and sixty emergency cases in this group, such as acute abdomens, fractured skulls, etc., and uses only cases which had chronic pathological conditions in which the surgeons had time for pre-operative study. These chronic cases amount to one hundred and sixty-five.

The causes of death of the one hundred and sixty-five may be segregated into a modification of the Codman Committee classification, as follows:

Unconquerable Diseases 165
Surgical Calamities 26
Lack of Technical Knowledge or Skill..... 50
Lack of Pre-operative Diagnostic Skill to Ascertain the Reserve Power of Other Organs or to Ascertain the Extent of Primary Disease, or the Number and Influence of Concomitant Diseases 55
Lastly, Unclassified, as data was not sufficient 21

The dissection of these groups discloses that in the unconquerable diseases, but 13, or 8%, died from the diseases for which they were operated upon. An example of this is a carcinoma of the vagina and urethra, operated upon; patient failed and died of the disease on the fortieth day.

In the "Surgical Calamity" Group, the twenty-six cases, or 16%, were divided among: Pneumonia, 14; emboli, 11; cerebral hemorrhage, 1. Today these cases are not charged against the surgeon. In the future, some of the conditions may be prevented or forecast. Pneumonia may depend upon pre-operative or post-operative treatment and some surgeons even now claim that a surgeon's technic is responsible for the production of emboli.

In the group classified: "Caused by Lack of Technical Knowledge or Skill," there were fifty cases, or 30%, and, under this division, infection occurred thirty-nine times. This was of the nature of erysipelas of the wound, peritonitis following the soiling of the peritoneum in gall-bladder, stomach and intestinal operations. Hemorrhage occurred eleven times. Possibly, with more care in the investigation of the coagulation of the blood and with more careful control of the bleeding at the time of operation, many of these could have been prevented.

Under "Death Due to the Lack of Proper Pre-operative Diagnosis," fifty-five cases, or 33%, were found. Concomitant diseases were responsible for the death twenty-six times. These were classified as due to purulent pericarditis, decompensated heart, uremia, dysfunction of the pancreas, liver, shock, etc. Twenty-nine cases in this group were put down as shock when there was no evidence of bleeding. These, if Crile's explanation of shock be taken, should be placed under the classification of "Surgeon's Lack of Skill"; but, if shock depends upon cardiovascular failure or dysfunction of the endocrine glands, or upon the disturbance of the sympathetic system, they fall under the head of "Inability to Recognize the Degree of Response of These Organs." However, under whichever division they are placed, the surgeon is clearly responsible.

In twenty-one cases, or 13%, the data described were not sufficient to ascertain the causes of death and really should be omitted in this discussion.

These statistics show that the mistakes due to the operator's lack of pre-operative diagnostic ability to gauge the patient's reserve force were responsible for the largest number of deaths; and that surgeons' slips in technic stand out boldly as the second great cause, while only thirteen cases, or 8%, died of the original disease. Giving the surgeon credit for doing no particular harm except that of making the patient uncomfortable in the cases in which the patient died of the uncontrollable disease, and attaching no blame to him for those cases of surgical calamity, and saying nothing about the 13% which died where the evidence was not sufficient to ascertain the causes of death, there still

* Read at Annual Convention, State Medical Association, April, 1917.

remains 63% where the surgeon must definitely assume the responsibility.

This report appears to be very disheartening and is the more so when it is remembered that the surgeons in the Massachusetts General Hospital are doing work which is quite as good as is being done in any of the American hospitals, and that this hospital is struggling to overcome its defects by publishing the bad results. Remembering this, an idea as to the nature of the work that is being done in other hospitals where no check is kept may be imagined.

The question naturally arises: Could any of these Massachusetts General Hospital deaths have been prevented? In a lay magazine of recent date, a large department store described its attempt to study the causes and the method for the prevention of mistakes in its employees, such as mistaken addresses, etc. This firm found 15,000 mistakes a month. By listing in public places throughout the institution the names of the individuals and the mistakes made, in a short time, the number of blunders was reduced to 1500. This is exactly what Massachusetts General Hospital is doing to its surgeons, and undoubtedly it will be as effective in medicine as in business. The discouraging part of it is the appreciation of the number of hospitals that are not checking their surgeons.

In the group where the deaths were due to bad pre-operative diagnoses, it is of interest to note that, in 1916, in ten of the twenty-four deaths in this group, the patients were in the hospital forty-eight hours or less. This, from our experience, is far too short a time to observe these grave surgical risks. Only seven out of fifty-five cases, or 13%, were transferred from the medical division, and it is assumed, then, that the 87% were admitted to the surgical wards and operated upon without having the opinion of the medical division. It is only fair to the medical staff to say that, if it had been consulted, a fair proportion of the 87% could have been corrected. It is doubtful if surgeons will ever get the best results until they routinely consult the medical division, take more time to study the chronic cases, and check their own results more critically.

At St. Luke's Hospital in San Francisco, more than three years ago, it was recognized that many operative mistakes were being made unnecessarily and, in an effort to overcome this, the surgeons of our organization consulted the medical members routinely before operations. But, even after following this plan, the post mortems and the clinical course of the patients too often proved that the results were still unsatisfactory. This necessitated further improvements which were accomplished by organizing our internists, laboratory workers and surgeons into a group to study routinely, consult upon, and make a report of the cases before operating. While the deaths following chronic pathological lesions in this group are too few to be of any value in this study (two cases died of pneumonia on the ninth and eleventh days respectively), yet a presentation of the clinical material and the disposal of the surgical cases from the standpoint of group study may be of interest.

In St. Luke's group of 332 patients, there were 131 with major surgical pathological lesions. In 131, there were found 709 concomitant diseases, approximately, 5.4 per patient. The length of time necessary to examine these patients averaged 4.2 days, in contrast to the Massachusetts cases of less than two days. In 131 cases, the group of clinicians made the following disposition: No operation, 42 times; immediate operations, 32; surgical treatment if medical fails, 22 times; surgical, after medically improved, 30 times; therapeutic tests, five times. In approximately three out of the four, or 75%, it was found advisable not to operate at the time examined, and in 42, or approximately 30% of the cases, never to operate. It is probably true that at least 50% of the patients now operated upon for chronic conditions should be submitted to some other type of therapy. Whether this will be proven or not, investigating the patients by the method of group study places in the hands of the surgeon most valuable material as to the morbid process existing in distant parts of the patient's anatomy, making it possible for the surgeon to take whatever steps he deems advisable in regard to the control of the concomitant diseases. It is our contention that group study will in the future be widely practiced for preoperative investigation of patients, this method being constructed on the old adage, "Two heads are better than one."

More will be found of value in the actual study of the causes of surgical fatalities by placing the responsibility where it belongs than has ever been accomplished by surgeons excusing themselves by the statements, "I gave him a chance," "He would have died anyway." Surgeons must remember that the patients come to them alive and it is their duty to send them away alive.

The Massachusetts report would seem to indicate that the medical division is not consulted frequently enough in the calculation of surgical risks. If such unbiased reports as the Massachusetts General's could be published from every hospital in America, surgeons would soon lose their ego, soon realize their responsibility and quickly take steps to overcome their faults; but hospitals will not do this until they are forced to it.

If the American Medical Association or the American College of Surgeons or any other group of organized medical men would require of its members a description of the clinical course of every operative fatality and then would point out how the case might have been better conducted, much would be accomplished in an educational way for surgery. Such a course would abrogate the necessity of the laity passing laws to protect their rights, which some of the States are now attempting to do. The Diagnostic Section of St. Luke's Hospital, in its pre-operative work, by its routine group method of study is making an attempt to solve the problem of the too hasty and incomplete pre-operative investigation that is all too frequently charged against the profession.

Dr. Sherman has said with some truth that Dr.

Birtch deals with a psychological as much as a surgical problem, and with limitations and differentiations, I am inclined to agree with him, although perhaps on quite a different ground to that which he has advanced. He has told us that what is needed to change failure into success, and eliminate the percentage of deaths from faulty diagnoses, is a cultivation in the surgeon of the faculty of patience and careful examination. Without in any way disparaging the acquirement of these very necessary qualities in both surgeon and physician, I cannot help thinking that the trouble lies deeper. In the old days and in Europe, even until quite recently and still in many places, it has been the custom for the diagnosis to be made by one who is not engaged in surgical operative work; who can concentrate, therefore, the whole of his time and faculties upon the problems which the recognition of disease involve, leaving the surgeon to do likewise in the acquirement of the manual dexterity upon which his success is dependent. And this is not merely a question of arbitrary selection, it is based upon the fact that the psychological attributes needed for carrying out operative procedures are entirely different from those needed for the recognition of obscure conditions depending on many factors. The first requires the objective type of mind, the second the subjective, and any psychologist will tell you that human faculties are more commonly sharply divided into these types than combined into blends. The objective type of mind, in which stimuli result in immediate and rapid action, will lead the medical practitioner who is its possessor naturally to surgery, in which these attributes are absolutely necessary to success. Equally, the subjective type of mind, with its difficulty in taking immediate action because of its natural tendency to prior reflection, will surely engage in the intellectual task of diagnosis, wherein it finds its proper field. In other words, I think there is good ground to show that as a matter of scientific psychological knowledge, the attempt to combine the qualities of surgeon and physician in one man is almost doomed to failure, and that the hope of the highest success is in going back to the old method of letting the internist diagnose and the surgeon operate.

CARDIOSPASM.

By THOS. J. ORBISON, M. D., Los Angeles.

This is the name given to a neurosis the dominant symptom of which is oesophageal spasmodic closure at or near the cardiac end of the stomach during the act of deglutition.

It should be noted that the spasm is not the disease, but a symptom of the underlying nervous imbalance that is responsible for the disturbed nervous tone. In health, the balance between the anatomical parts of the nervous mechanism is maintained automatically, and there is a condition of almost unconscious regulation of the mechanism of deglutition which we regard as normal tone. While this normal tone is maintained, the food is masticated, lubricated by saliva and passed over the posterior portion of the tongue, in which reside the taste buds, and comes in contact with the pharyngeal walls where it sends stimuli through the "chief spots" and "accessory spots" in an afferent direction. The efferent response causes muscular contractions which send the food in more or less of a squirt into the upper portion of the oesophagus.

A fluoroscopic view of the oesophagus shows the stream of the bismuth meal, after it has taken on this spurt, go trickling in a continuous stream through the oesophagus, through the cardiac ring and on into the stomach where various waves are set up by the reaction of the nervous mechanism and muscles of the stomach to the stimuli set in play by the ingested material.

In the patient suffering with the neurosis of which cardiospasm is a symptom, instead of the unconscious action and interplay of the "autonomic," "sympathetic" and intrinsic nerve supplies of the lower oesophagus and cardiac ring, there is a disharmony due, for example, to heightened irritability of one or the other of these systems, with consequent disturbance of balance and loss of integrity.

The result may be a spasmodic closure near the cardiac end of the stomach lasting a longer or shorter time and the consequent holding of the ingested material in the lower oesophagus. Upon this accumulated mass the ill balanced play of muscular action spends itself, and the result is pain back of the sternum, gagging, intense mediastinal distress and regurgitation of food that is, of course, undigested.

Inasmuch as vagus irritability is responsible for a goodly number of cases of cardiospasm, there are those who class the patients as of the "vagotoniacs." While it is true that cardiospasm may be one of the symptoms of vagotonia, nevertheless the diagnostician should not force this diagnosis. In the next few years, it will be more and more common to see various of the hitherto unlabeled neuroses recorded as either "vagotonias" or "sympatheticotonias." While this will undoubtedly be correct in very many instances, yet it will not be in the line with wise conservatism to do so without due analysis and correlation of the symptoms and etiological factors.

The latter have been grouped (Held & Gross, J. A. M. A., Jan. 22, 1916) under five heads:

1. Patients whose vegetative nervous system is below par through inheritance.
2. Cases in which the vegetative nervous system becomes involved because of an inborn status asthenicus.
3. The cases in which the cardiospasm is reflex to irritation from other diseased organs (carcinoma of the fundus and lesser curvature of the stomach, gall stones, renal calculus, chronic pancreatitis, etc.).
4. Cardiospasms due to toxic and metabolic agents (lead, uremia, gout, etc.).
5. Cases due to local disease of the oesophagus (fissure, lesions, ulcer, etc.).

The chief conditions to be differentiated from cardiospasm are spasm of the oesophagus, stricture of the oesophagus and diverticulum of the oesophagus. The diagnosis is made clear by appropriate sounding and by the x-ray picture.

Symptoms: Inasmuch as true, uncomplicated cardiospasm is a functional disturbance that is set up when the attempt is made to ingest food, with the result that the ingested food is denied ingress into the stomach, it follows that the symptoms must be general and localized distress due to

the spasm; regurgitation and churning of undigested food; at times, hiccough; at times, pain back of the lower sternum, together with accompanying local and neighborhood symptoms.

Oftentimes, the patient is able to swallow solids more easily than liquids. Many complain bitterly of hunger and of the fact that just when they have begun to eat, or take the first spoonful of liquids, they are destined to leave the table, or are forced to await the cessation of the spasm.

The food sometimes remains in the lower oesophagus until it begins to ferment; and then, when ejected, it will possess a sour taste and evil smell. There is, of course, a great deal of mental distress with bodily emaciation.

Treatment: Fortunately, in cases of uncomplicated cardiospasm the results of correct treatment are dramatically happy. The patient is given a spool of silk thread six yards long and told to swallow slowly three yards of it in the evening and the next three yards next morning. Thus the distal end should have become anchored in the small intestine and the proximal end remain on the spool which should be pinned securely to the night dress.

When sufficient thread has been swallowed and one is sure, by exerting traction, that it is anchored and not simply lying in the oesophagus or stomach, the proximal end is threaded on to the metal bulb which is fastened to the flexible end of the instrument made for this purpose which is composed of a dilatable rubber bag fastened distally to a rubber tube—these are of various makes.

The thread acts as a guide or trolley by which the instrument is guided into the locus of spasm and prevented from going astray, and thereby damaging the walls of the oesaphagus. The patient is directed to swallow the instrument as he would a stomach tube. When the rubber bag has become engaged in the ring, it is dilated by a graduated water pressure gauge and the dilatation maintained for several seconds, or minutes, as the case may be.

The result of one treatment has often been a cure. It is, however, deemed wiser to repeat the operation two, three or even four times at weekly intervals.

The case to be described is remarkable for several reasons: the age of the patient, the complications which had from time to time arisen, viz., diabetes, cardio-vascular-renal disease, high blood pressure with vicious pulse pressure, cardiac arhythmia, intestinal stasis, emaciation, and, to cap it all, an intra-cranial hemorrhage. This was followed in a short time by a trans-continental journey which was obstinately carried out against the advice of his home physicians who feared that malignant disease of the lower oesophagus or stomach was the cause of the cardiospasm.

Case 1. J. J., aet., 67 years, married, consulted me on December 28, 1915.

Family History—Both parents were healthy through most of their lives. One sister died with asthma. The families were considered long-lived. Two daughters are alive and healthy. One child died at 14 years with diphtheria and one died in infancy.

Previous History—As a youth and young man this patient was very healthy, but for the last twenty years he had suffered with a succession of complications beginning with diabetes. This was checked in time and for some years has not given him much concern. Five years ago, he developed a cystitis that became very persistent. His aversion to taking even ordinarily good care of himself from a medical standpoint has resulted in his failure to take and put into practice even superficial medical attention and advice. Thus his condition of health has become undermined. It is certain that he has suffered with cardio-vascular-renal disease for years. He had evidently paid little or no attention to the symptoms as they arose and was criminally negligent of his own condition.

Present Trouble: About one year ago, he first complained of symptoms of cardiospasm; i. e., when drinking iced drinks, he began to have to wait for a time for the liquid to get into the stomach. Soon there developed hiccough and explosive efforts. In a short time, the syndrome of cardiospasm fully developed itself. Liquids would foam up into the mouth. Vomiting ensued. As time went on, there would not be a meal that could be taken in comfort. He lost weight and became very much depressed and uneasy. Just a month before consulting me, he sustained a cerebral hemorrhage. As he was attempting to go to the toilet he fell. When he was picked up and put to bed, it was evident that he was mentally clouded. The left side of his face showed the signs of a central facial palsy. Saliva drooled from the left side of his mouth, the left arm was very paretic—almost paralyzed—and the left leg similarly affected, but to a less extent. He does not remember much that transpired during the next ten days to two weeks. During that period he often vomited.

Physical Examination: He was seen by me just subsequent to the four days' trip across the continent from Boston. The facial paresis was still quite evident and the drooling persisted. The arm and leg were much stronger than they had been and he could shuffle about with but little assistance.

The peripheral arterioles over the face were very noticeable and in many places over his body were subcutaneous petechial hemorrhages. Emaciation was quite marked. The abdomen was pendulous and protuberant.

The pupils were equal and reacted normally to light and in accommodation. The distal phalanges of the fingers were decidedly clubbed and cyanotic.

Auscultation over the heart region elicited coarse murmurs over the mitral and aortic zones, systolic in time. Arhythmia was excessive, and cardiac action tumultuous. The blood pressure apparatus registered 200 systolic and 100 diastolic. Rales were heard over the base of both lungs.

A series of examinations of the urine showed conclusively the presence of a chronic renal disease with a chronic cystitis.

Dr. P. G. White was called as a consultant

and to assist in the management of the case. He "screened" the patient after a bismuth meal and secured a picture of the conditions immediately following. It very prettily showed the gourd-shaped oesophagus, with the constriction of the cardiac ring holding back the bismuth meal. Nothing else that was pathological was observed, except that there seemed to be a bulging or dilatation of the aorta just distal to the heart.

Six days later, we effected the first dilatation, following out the method outlined above in its various steps. Fifteen minutes after the dilatation, the patient swallowed a glassful of water without any symptom of spasm or distress. It was the first comfortable experience of the kind he had had in months. His next meal was enjoyed, as well as subsequent meals.

It was deemed best to do nothing else of a radical nature and for the next two weeks he was given suitable nourishment, with rest and massage. Under this regime, he improved markedly in strength and general mental and nervous tone.

The condition of the kidneys was not grave and the relief from the strain of the daily vomiting upon his arterial system made the situation much safer for the patient.

Dr. E. Avery Newton was called in consultation for the purpose of taking an electro-cardiographic picture, as we desired to obtain more data relating to the circulation, with the idea of applying a series of Nauheim baths. A second dilatation was made and the patient was put upon a suitable diet and the baths begun. A third dilatation was tried, but failed. He continued to maintain his improved condition as to the spasm, but soon passed out of my care into other hands. Since then, after some indiscretion, I was told, he sustained another cerebral hemorrhage.

Following the relief of the cardiospasm the improvement of the general tone and physical strength was immediate and quite remarkable. With this, there was less mental depression and a very much more livable existence for the patient —for he was indeed in a very precarious condition before the cardiospasm was corrected. The correction paved the way for his future betterment and made it possible.

SELECTED APHORISMS FROM ISAAC JUDAEUS, 830-932 A. D.

The physician who promises to cure disease with certainty takes a serious responsibility upon himself.

Never rely in treatment upon wonderworking cures, for these depend upon ignorance and superstition.

Seal thy mouth to prophetic and self-evident expressions. What thou sayest should generally be stated as conditional.

Suffer not thy mouth to condemn when something happens to a physician, for everyone has his evil day. Let thy deeds praise thee, and seek not thine honor in another's shame.

Make it thy special concern to visit and treat poor and needy patients, for in no way can thou find more meritorious service.

A NEW DEVICE FOR HOLDING FRACTURES OF THE LONG BONES.

J. A. SIMPSON, M. D., San Francisco.

The present treatment of fractures of the long bones has not given uniformly good results. While the introduction of the Lane plate has marked a distinct advance in the treatment of these cases, the results have often been disappointing.

The reason for this is not difficult to see; the screws used taper from head to point and cut their own thread in the bone. Living bone, under pressure, may absorb, leaving the screw loose. The plate separates from the bone and muscle pull brings about shortening and deformity. The loose plate and screws become irritating foreign bodies and have to be removed. The last end of that patient is worse than the first.

Believing that the principle of the internal splint is sound, but that its application has been faulty, I have constructed a device free from the objections above mentioned. It consists of two parts,—a screw and a cannula, and is called a bushing-screw, as the device is both a screw and a bushing. The length of the screw corresponds accurately with the depth of the bore in the bone (the diameter of the bone) and is threaded only for a short distance at the head end, as shown in the plate (Fig. 7).

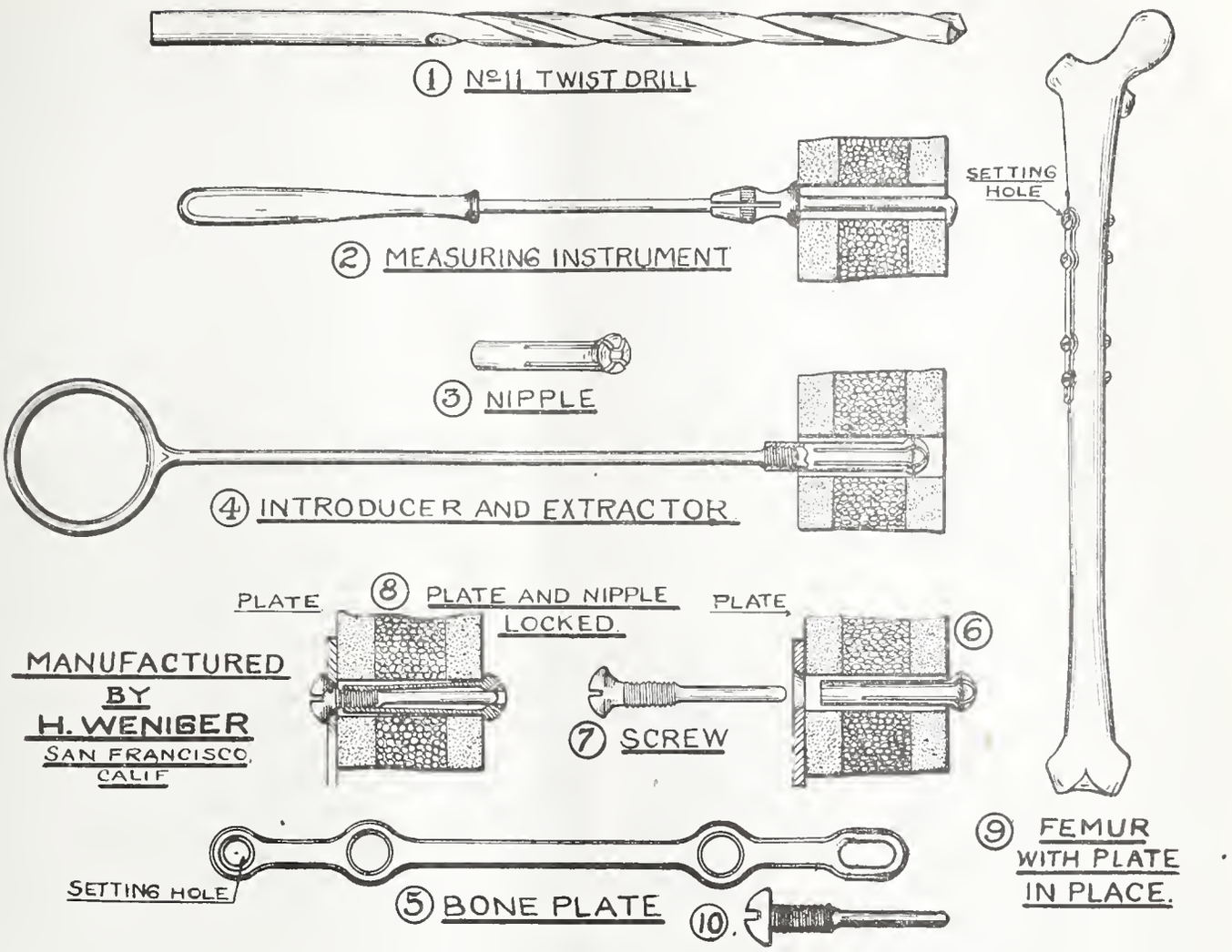
The cannula, marked nipple (Fig. 3), has a double taper head on the distal end, to facilitate introduction and extraction. Four longitudinal, parallel sections are cut out for two-thirds of its length, beginning at the distal end, which enables it to pass through the drill hole prepared for it. At its proximal end it is threaded on the inner surface for about one-third of its length to correspond with the threads on the screw. The cannula is made the exact size of a standard drill, for the femur, No. 11 twisted drill (Fig. 1). The portion of the cannula from which the sections have been removed is tempered and slightly spread, in order, by friction, to facilitate the insertion of the screw.

An inserter and extractor (Fig. 4) is used as its name suggests.

A caliper (Fig. 2) is used for measuring the length of the drill hole.

In oblique fractures no plate is needed; all that is necessary is to expose the fracture by incision, reduce it and with the bone held firmly drill two holes, properly located, pass the screws through and tighten them.

In transverse fractures a plate is needed and one that differs somewhat from those in general use, in that fewer holes are needed, but of somewhat larger size (Fig. 5). The first screw is inserted at point marked setting hole. In the other end is a slot instead of a hole; here the second screw is inserted by making the bore at the center of the slot. This arrangement enables the operator to readjust the fragments, if necessary, without removing the plate; a flat head screw



(Fig. 10) is used here. With the end screws tightened the other holes are drilled and. screws inserted and tightened. Fig. 9 shows bone plated.

The advantages of this device are that when applied, it has the effect of a screw with a head on both ends. It gives a firm grip on the plate, if one is used, and on the compact tissue on the opposite side of the bone.

Furthermore, nothing is left to chance or guess-work and the operator works with all the precision of a machinist. The standardization of tools alone is of no small advantage.

The parts of the bushing-screw can be made to correspond in size with that of any of the long bones; so far we have confined our work to the femur alone.

The message of the European war and the suffering of our countrymen have taught us this, and it is a lesson which I believe we shall all incorporate in our school tradition: that by the small incident and by attention to small details, by accurate work, by the passion and love for minutiae, we shall enlarge the horizon of those we have to teach, so that old quarrels between nations that should be friendly vanish as they are seen in their true proportion, and a new people will be built up that will lay a firm hold upon true principles of government and thereby secure the healthy progress of mankind.—From the address of Prof. Geoffrey Butler, Dean of Corpus Christi College, Cambridge University, at the 53d University Convocation.—"Volta Review."

VACCINE THERAPY.

By T. H. GLENN, M. D., Los Angeles.

The use of vaccines as a prophylactic, as well as a curative measure, has undoubtedly been over-rated by some workers, and under-valued by others. Frankel, Miller and others have shown that many of the reactions, which were earlier thought to be produced by autogenous vaccines only, can be produced by non-specific proteins. Others have shown that good results, especially in arthritic cases, may be brought about by the intravenous injection of colloidal preparations, of which colloidal sulphur, produced by the French, is a good example. Even as early as 1893, De-Bacher of Paris recommended the use of the yeast ferment in the treatment of microbic diseases. Victor Vaughn, in 1894, advocated the use of nuclein and nucleinic acid in the treatment of disease, claiming that the natural resistance to disease is strengthened by a physiological increase of the white corpuscles which is induced by the introduction of nucleins and similar substances. Hawk and his co-workers have recently revived yeast therapy and report some interesting results.

Most of the workers, such as Miller and Frankel, have limited their investigations to typhoid fever or acute arthritis, usually self-limited diseases. In many of their cases, they were able to limit the course of the disease by the injection of foreign proteins. It should excite no surprise that good results in acute infections may be brought

about by the intravenous injection of foreign proteins or even colloidal substances or even salts, such as magnesium sulphate, even as favorable as those resulting from the use of autogenous vaccines. Immunity reactions take time, and very often acute infections subside within the time essential to produce immune bodies. Naturally, therefore, any substance, whether it be a protein, a colloid or nucleins, that will increase the leucocytes and stimulate their activity will aid in limiting the course of the disease. Insofar as the production of a leucocytosis is concerned, vaccines are non-specific and the benefits derived from their injection are the same in all diseases. That autogenous vaccines do more than non-specific proteins is demonstrated by the fact that protective bodies remain after the injection of specific proteins long after the leucocytosis or increase of temperature has subsided. The work of many of the earlier bacteriologists demonstrated that these protective bodies play a part in limiting the disease and their work has been amply confirmed.

The evidence in favor of prophylactic vaccination was first furnished by Pasteur, and this evidence has been increasing ever since. While it must be admitted that much of the freedom from typhoid among the soldiers in the trenches is the result of better sanitation, this alone can not explain the enormous decrease of typhoid morbidity in this as compared with other wars. The results of prophylactic vaccination have been so pronounced that no sanitarian of the present time desires to go back to pre-vaccination days.

Vaccines as curative agents, however, have not become so powerfully entrenched. Vaccine therapy has failed in a goodly number of cases. These failures are in many cases due to the fact that the vaccine has not been given at the proper time, to the proper subject and in the proper amount. Too often, vaccines are used as a last resort after all other forms of medication have failed. This obviously is the worst time they could be used and they certainly get the crucial test.

If specific results are desired, the causal organism or organisms should be isolated, identified and their relationship to the disease established if possible. The vaccine should be made from these organisms. In many cases the isolation of the causal organism is very difficult. Especially is this so in mixed infections where it is not always easy, sometimes impossible, to tell which is the causal organism and which the contamination even with the aid of the agglutination reaction. If, however, an autogenous vaccine be used, that is, if the vaccine be made from a culture made from the lesion, especially if the proper media is utilized in obtaining the growth, the causal organism is more likely to be present in a vaccine so made than in any stock vaccine, no matter how carefully selected. The selection of a stock vaccine is exceedingly difficult unless a bacteriological diagnosis has been made. As a matter of fact no vaccine should be used until a bacteriological diagnosis has been made and the best vaccine is always the one made from organisms isolated from the lesion.

It is our custom to grow all organisms on the patient's blood agar. Agar made in the usual way is melted and cooled down to 43 degrees centigrade, a few cubic centimeters of blood are then taken from the patient's arm and the blood and agar mixed. The blood agar tubes are allowed to cool in a slanting position. Pus, sputum or other material is smeared over the slanted blood agar and the tubes are incubated. Smears are made on glass slides at the same time cultures are made. These are stained and examined. At the end of 24 hours, slides are made from the cultures and compared with the direct smears. If cultures are suitable, the vaccine is made from them.

By growing the organisms on the patient's own blood agar, we not only get a maximum growth, but the organisms found on these cultures more closely resemble those seen in the direct smear. Organisms thus grown may also be slightly sensitized by the patient's blood. The use of the patient's own blood makes the transfer of any disease which may linger in the blood of another impossible and at the same time avoids any injurious reactions which might result from the injection of foreign sera.

Having isolated the organism, it is essential to destroy it or rather render it lifeless without changing its chemical character any more than absolutely necessary. Some use chloroform to kill the organisms, others saturated solutions. Many methods have been devised, but it is our custom to use heat. We suspend the bacteria in salt solution, filter them through sterile absorbent cotton to remove all clumps and then kill them at a temperature just high enough to kill the bacteria, but not high enough to coagulate the albumin left over from the patient's blood.

Having overcome the errors of production, it is always wise to determine whether or not the patient is a fit subject for vaccine therapy.

Vaccines merely stimulate the normal powers of resistance. They do not create new powers. If these powers are lost, if the body is completely run down, one should not expect to get good results from vaccination.

Early in the manufacture of diphtheria antitoxin, the producers learned that nervous horses did not produce as much antitoxin as a result of the same stimulus as did less nervous ones. The same thing must be taken into consideration in vaccine therapy. The best results can not be expected in the high strung nervous individuals. If one is to get the best results in these cases, he must alter their nervous condition; for, while they are subject to so many nervous explosions, any stimulation of the antibody producing cells is certainly at a minimum. Neither can one expect good results if the tissue changes have been great. Vaccines have no effect upon the tissues. They increase the body's power to destroy invading organisms, but they do not in any way aid the destroyed tissue to return to normal. If the tissues are destroyed or replaced by tissues of a lower grade, vaccines will have effect only so far as they tend to check the progress of the infection.

Vaccines are not substitutes for surgery. Wounds must be drained and the pressure removed from

the tissues so that a goodly supply of blood may get to the injured cells. When physiological drainage is established, vaccines may then be used to stimulate the normal forces to do their utmost to destroy invading organisms.

If the patient is run down, if his gastrointestinal tract is sending a stream of toxic substances into his system, one can not expect vaccines to do the most good. Nor can one expect a patient who is so weak that normal stimuli fail to bring forth the least response to respond actively to vaccine therapy. The best results are always obtained in those cases who themselves normally react to invading parasites. The ideal reaction is in the person who is perfectly normal; hence the good result from the use of vaccines as a prophylactic measure. The reaction in acute and chronic cases is practically the same except in chronic cases the patient has still the power to a limited extent of keeping the bacteria in abeyance though not enough power to destroy them entirely. Vaccines stimulate the cells to increase this power.

The same stimulation which enables a person to become prophylactically protected by specific vaccines is at work whether the person is well or diseased. While it may be true that the ill person has not such a great power of response to vaccine therapy, it certainly can not be true that he loses this power the moment he is attacked by invading micro organisms. If prophylactic vaccination is specific, certainly curative vaccination has a specific function which on account of the length of time essential to produce its maximal results is best seen in cnronic cases. If the healthy body can produce specific anti-bodies as a result of prophylactic vaccination, the sick body must certainly retain some of this anti-body producing power. The intensity of the reaction, all other things being equal, depends upon the functioning power of the body cells. This power is at its height in the healthy body and may diminish as the cells are overcome by disease. The best time to use vaccine therapy, therefore, is not as a last resort, but early in the disease. If used early, the response will be more intense and the number of failures will be far less numerous.

525 Marsh Strong Building.

RECTAL HEMORRHAGE.*

By ALFRED J. ZOBEL, M. D., San Francisco.

When blood appears from the mouth or urethra, whether it be in mere traces, free, clotted or mixed with sputum, vomitus or urine, it is generally a matter of much concern to the average individual. He usually consults a physician at the earliest moment, and the probabilities are that every modern scientific method will be employed to discover the source of the bleeding.

But if there should be even quite a profuse discharge of blood from the rectum, that same individual will most likely procrastinate, and, satisfying himself with a selfmade diagnosis of, "just a little attack of piles," will put off seeking medical attention in the hope that the bleeding will soon pass away either of its own accord, or after the use of some proprietary remedy. Occasionally there is someone, perhaps more easily alarmed or a bit more cautious about his health than his fellows, who will come for advice immediately after the first appearance of rectal bleeding, but the great majority are apt to wait for some time before doing so. When they finally do seek advice, too often their self-made diagnosis is accepted without question or rectal examination, and treatment is given for the supposed "piles." That this is not an exaggerated statement, those will testify who see many cases of rectal cancer which are left undiagnosed until too late.

The history records in the department of rectal surgery of the San Francisco Polyclinic, and in my private practice, show that the complaint for which most patients come for treatment is "piles." No matter what is really wrong, every symptom about the ano-rectal region is attributed to this. Among the symptoms mostly complained of, "bleeding from the rectum" holds first place. In most cases it has been present, on and off, for more than one year, and usually no effort has been made to find the cause.

On examination we find that in most instances the hemorrhages do arise from internal hemorrhoids, but sometimes they do not. In fact, I believe the proportion of the latter is far greater than the general profession seems to be aware of, for numerous instances have come under observation where there has appeared to be a lack of knowledge that rectal bleeding might arise from other causes than hemorrhoids. As the result of neglecting to make a rectal examination, at times a cancer has remained undiagnosed, whereas had it been done the growth might have been found and removed in the early stages before it has become inoperable. It is this which offers the excuse for the presentation of this paper, wherein attention will be directed to the significance of blood discharged from the rectum, its possible points of origin, and the necessity for and value of thorough examination of the anus, rectum and sigmoid in every case where rectal hemorrhage occurs.

A patient's estimate of the amount of blood which he loses is not always to be taken at full valuation. Not that it is purposely exaggerated or underestimated, but because there are few people who are capable of stating it accurately. As a rule they claim that much more is being lost than is really the case. Seeing a reddish discoloration of all the water in the toilet bowl, is what often gives them the false impression that a large quantity of blood is being discharged. Yet, on the other hand, I have learned by experience that every patient's statement is worthy of full consideration, as there have been times when I doubted what seemed to be an exaggerated history, and found, much to my surprise, that the rectum and sigmoid was full of dark liquid and clotted blood.

Some patients will declare that they have never seen any bleeding, or have had only a slight discharge now and then. Even such a history will bear further investigation, for there are individuals

* Read before the San Francisco County Medical Society, August 7, 1917.

who are quite careless about themselves, never taking the least pains to learn what is wrong even if they do have untoward rectal symptoms. Again, it may be that the light in the toilet was so dim as to make it difficult to see anything even if it was there.

Digressing here for a moment, I would make the suggestion that the diagnostician and general practitioner should invariably ask his patient if there is or ever has been any discharge of blood from the rectum, just as he always questions regarding the spitting, coughing or vomiting of blood from the mouth. If this becomes part of a routine questionnaire, it might sometimes furnish the clue to the diagnosis of a seemingly obscure condition. In a paper read before the American Proctologic Society, in 1916, on "The Consideration of Anorectal and Colonic Diseases in Life Insurance Examinations," I stated that, if more stress were laid on this question by life insurance examiners, their companies would many times be saved from accepting undesirable risks. The reasons therefor will appear further on in this paper.

Replies to the question whether the bleeding comes before, during or after stool, or without any relation to it, are likewise often misleading, simply because the patient may not be of an observant nature. From some patients you can readily learn if the blood comes away free, or mixed with mucus, pus or feces; or if it is bright red, dark, or tarry in appearance. From others you can gain but meager information.

The color of the bloody discharge depends of course upon where it originates, whether high or low in the bowel, and upon how long it has remained there. When bright red it comes, as a rule, from a lesion in the anus or rectum. Yet in a massive hemorrhage from high in the intestines it may also be this color, should it be discharged soon after leaving the bleeding vessel. This does not happen frequently. In all the large hemorrhages I have observed, where the proctoscope has shown that the bleeding must have arisen at some point above the lower third of the sigmoid, the blood was fluid, quite dark in color, and containing large clots, or was tarry in appearance, with a characteristic foul odor.

Though the lesions causing tarry stools come more within the province of the internist and the abdominal surgeon, yet for diagnostic reasons they must always be taken into consideration by the enteroproctologist, and so on this account will be mentioned briefly here.

Bleeding from gastric and duodenal ulcers and cancers is the usual cause of passages having a tarry appearance. They may also follow severe hemorrhages from the nares, lungs, ruptured varicose oesophageal veins, or typhoid ulcerations. Portal obstruction from any cause, but particularly so from cirrhosis or cancer of the liver, acute yellow hepatic atrophy, purpura hemorrhagica, hemophilia, leucaemia, aneurism, thrombosis of the superior mesenteric artery, and scurvy also may be causes. The rupture of an aneurism of the abdominal aorta into the bowel would naturally give rise to a massive hemorrhage, but the diagnosis of the causation, if the case were seen for the first time, would be made on the post-mortem table.

In passing from the subject of tarry stools it may be said that they are not seen in carcinoma of the colon, as profuse hemorrhage seldom arises from these growths.

When there is profuse bleeding into and from the rectal cavity, it is generally from an ulcerating cancer of the sigmoid or the rectum. The discharge is then fluid, dark colored, contains clots, and is mixed with tissue debris and feculent material.

I shall pass over rapidly an enumeration of other lesions and diseases in which there is bleeding from the rectum, in varying amounts and color, either free or mixed with the stools, but with which again the internist is mostly concerned, —such as yellow fever, septicemia, pyemia, pernicious malarial fever, dengue, typhoid fever, jaundice, abdominal injuries, intestinal hemorrhages not due to tuberculous ulceration, such as may appear as an intercurrent event in pulmonary phthisis, sudden diarrhœal attacks with bloody mucus which are sometimes present in exophthalmic goiter, the streaks of blood in the passages arising from the ingestion of arsenic and phosphorous, cancer or ulceration of the large and small intestine, intestinal parasites, crises of bloody diarrhea accompanied by paroxysmal pain which form one of the most important symptoms betraying the presence of arteriosclerosis of the intestinal vessels,—and confine myself only to the consideration of such causes of macroscopic bleeding as are localized in the anus, rectum and lower sigmoid, excluding therefrom hemorrhage during or following operation.

We shall begin by taking up rectal bleeding in children. This is a subject which has been given very little attention, as not many of these cases are seen. But since hemorrhoids are rather infrequent in children,—though they have been reported in those as young as three years of age, and even in infants, (in whom they are congenital),— and as hemorrhoids in children rarely bleed, a snap diagnosis of any rectal bleeding being due to "piles," is very apt to lead one into difficulties.

The most common source of rectal bleeding in those under ten years or so of age is the solitary polypoid adenoma, which is usually found on the posterior wall of the lower end of the rectum. It may be about the size of a cherry, and has frequently quite a long pedicle, which allows it to be brought out of the anus by the finger. It is often protruded during defecation and then appears as a small rounded reddish growth, at times with the surface bleeding, the result of abrasion by hardened feces.

Multiple polypi may exist. The bleeding then may be quite profuse, and the results most serious. Their presence can be diagnosed only by proctosigmoidoscopic examination. This can be done as easily in a child as in an adult.

Fissures of the anus are not uncommon in children. In infants, and in older children, they are often the consequence of the nurse ignoring the true direction of the anal canal and inserting a thermometer or an irrigator nozzle wrongly and

too forcibly into the rectum, causing a tear in the anal mucosa, which, becoming infected, develops into a true fissure. A drop or two of blood from this may be passed with every bowel movement.

Multiple fissures about the anus, the concomitant of early hereditary syphilis, bleed very easily during and between bowel movements. When there is an ulcer in the rectum, there may be bleeding with every stool. It may be only small in amount or so large as to cause general symptoms.

Traces of blood in the stools, and sometimes even quite profuse hemorrhages are present with the catarrhal proctitis and colitis of children. On examination the bowel mucosa is seen to be reddened and swollen, and to have a tendency to bleed quite readily.

There is one form of colitis,—that due to infection by the ameba hystolitica,—which is relatively rare in children. Yet it is to be remembered that it does occur, and that, as Henry Dwight Chapin says, it is perhaps more common than we think, the probabilities being that we have not looked for it with sufficient diligence. Butterworth has reported a case in an infant of thirteen months. There are frequent stools containing blood. It is said that the hemorrhages have even resulted in death.

In intussusception of the bowel, blood is seen mixed with the diarrhoeal stools. Carmichael states that when blood and mucus are found in the rectum of an infant under one year, it never fails to indicate the presence of an intussusception.

Foreign bodies and prolapse also may cause rectal bleeding in little ones. In prolapse there is rarely bleeding unless the mucosa is traumatised. While malignancy is an exceedingly rare condition in children, still it does occur, and must be thought of when endeavoring to locate the source of a rectal hemorrhage.

Turning now to those local conditions in adults which give rise to the symptom now under discussion we will commence with the one which is most frequently the cause,—internal hemorrhoids.

Bleeding is one of the chief symptoms of internal hemorrhoids. It is present in more than 75% of all the cases seen. In the majority of these but a few drops of blood are passed while the patient strains at stool. In the others, the piles become prolapsed, and when there is heavy straining, the blood is started in a fine continuous stream, spraying the sides of the toilet bowl and reddening the water at the bottom.

Numerous instances have come under my observation where the hemorrhoids constantly protruded while the sufferer was up and about, and the bleeding was so profuse that it saturated the undergarments and trickled down the legs.

It is not to be forgotten that hepatic cirrhosis may explain the occasional copious bleeding in some cases of piles, the discharge acting as a safety valve for the surcharged portal circulation.

Distended hemorrhoidal veins located high up in the rectum at times give rise to frequent and alarming hemorrhages in individuals who are otherwise healthy. They are not infrequently causes of occult hemorrhages, resulting in a severe anemia, often leading to a false diagnosis of pernicious anemia, especially when no procto-sigmoidoscopic examination had been made.

On several occasions, the first time I saw the patient, I have mentally labeled the case as one of cancer, on account of the seemingly characteristic color of the skin, and the general appearance. A remarkable change for the better took place in looks and physical condition after the removal of the offending bleeding hemorrhoids.

While the subject of treatment was not to be touched upon in this paper, it may not be amiss at this point to say that an operation for the removal of bleeding hemorrhoids is always advisable even when the hemoglobin is very low from the repeated hemorrhages. In the majority of cases it can be done under local anesthesia without pain or shock to the patient. In certain selected cases the injection method of Terrell can be used. This will promptly and effectually stop the bleeding, and often will effect a cure.

There is rarely any bleeding from thrombotic external hemorrhoids, but I have seen a few cases where the overlying skin has ruptured and the vein kept pouring out its content in a small but steady stream, the contraction of the lumen of the vessel being prevented by the presence of the thrombus.

An ordinary simple fissure of the anus bleeds little, if any. A trace, or a drop or two, may be present following the passage of a hard stool. The latter may be lightly streaked with the sanguineous fluid. However, should the lower end of the fissure be without the grasp of the sphincter then there may be sufficient bleeding to trickle down the limbs.

An ulcer of the rectal mucosa is always accompanied by more or less bleeding. When the ulceration is caused by rapidly spreading syphilitic, tuberculous or malignant disease, the hemorrhage is often quite profuse and even alarming. One of the most severe hemorrhages which has ever come under my observation was caused by the ulceration of internal hemorrhoids following their injection with carbolic acid, a few days before, by one who had long experience in that method of treatment.

Prolapse of the rectum, unless of an aggravated type, or complicated with hemorrhoids, does not bleed except when the mucosa is irritated by rubbing when outside of the anus, or by being frequently replaced.

Hemorrhage from a pedunculated rectal adenoma is not infrequently met with when examining a patient presumed to be suffering from bleeding internal hemorrhoids. The blood is generally mixed with mucus, but it may be quite free when the growth becomes twisted on its pedicle, protrudes from the anus, or has its surface eroded.

With multiple adenomata of the rectum and colon, profuse hemorrhages and diarrhœal movements, consisting of blood mixed with feces, are predominant symptoms. An accurate diagnosis of this condition can be made only by a sigmoidoscopic examination.

Similar symptoms are present in hemorrhagic

colitis. In this disease the quantity of blood lost in twenty-four hours may be as much as 500 c. c. Seen through the protoscope, the mucosa of the bowel presents a curious spongy appearance, with blood oozing from minute points on the walls, gathering, as one observer puts it, "like sweat on the brow."

There is more or less bleeding in severe proctitis and the various forms of colitis. The blood is generally mixed with mucus or feces, or with both.

Within the past month I saw a woman who had been under treatment for a mucous colitis. The main symptom was the passage of mucus, stained at times with blood. I found what I thought to be an adenoma about the size of a large cherry, situated on the second valve of Houston. This was removed. The report of the pathologist, Dr. Wm. Ophuls, was, "Carcinoma."

In my own experience there is the most bleeding in proctitis when there are erosions in the mucosa overlying the rectal valves. This has been conspicuously so in several cases of amebiasis which I have seen. One of these cases was of particular interest. The patient was brought to me, in consultation, for severe rectal hemorrhages which were presumed to have resulted from traumatism due to the use of a "cascade" syringe. Proctoscopic examination revealed numerous typical amebic ulcerations.

Speaking of traumatism, this often plays quite a part in the causation of rectal bleeding. Leaving aside that bleeding caused by gunshot, stabbing, impaling, or any other form of external violence, we find that it often arises from small lacerations of the anus, resembling severe fissures. These bleed readily when the buttocks are separated. They may result from pederastic practices, injuries due to improperly directed and roughly inserted syringe tips or examining instruments, or from the passage of large hard fecal masses, long retained and then forcibly expelled.

The possibility that a foreign body may be the reason for the bleeding should always be thought of, especially so when it occurs in children and feeble-minded persons. Fishbones, pins, and toothpicks, are not uncommonly met with. Not long ago I found a large chicken vertebra obstructing the anal outlet of a woman whose symptoms before examination led me to think she had a fissure. Mummery has reported the case of a laboring man residing in a country where dysentery was indigenous. He was taken with acute diarrhoea, and passed much pus and blood by the bowel. After being treated by a doctor without results, for some four or five weeks, a rectal examination was decided upon, and revealed a broken egg cup impacted in the rectum.

Bleeding occurs in stricture of the rectum only when there is a complicating ulceration. During dilatation treatment there is more or less hemorrhage, but the etiology is then evident.

A rectal or anal fistula rarely bleeds unless it is probed. If the manipulation is unduly rough, considerably clotted blood will afterwards be found in the rectal cavity or anal canal, as the case may be.

Lynch tells us that periodical attacks of hemorrhage occur in chronic intussusception of the sigmoid. Bonney, Peters and Bullock report the same symptom in tuberculosis, without symptoms of tuberculosis of the intestine.

A most interesting, though rather rare, cause of rectal bleeding is that of vicarious menstruation. Personally I have never met with an instance of this, though cases have been reported by trustworthy clinicians. Irwin saw a woman who vomited blood and had a profuse rectal hemorrhage. There was no disease of the rectum to account for it. The bleeding occurred regularly at the time menstruation should have taken place, one to three pints of blood being discharged each time. Quintree mentions the case of a male, with lobulated well-developed mammae, who had an anal menstrual discharge which had persisted for eleven years. The blood escaped from the anus for two days, recurring every twenty-eight days. Numerous others have written of having seen individuals who had a periodic menstrual flow from the hemorrhoidal vessels.

I have purposely left for the last the mention of the most important of all the lesions giving rise to bleeding from the rectum; one which, by merely staining a mucous discharge, betrays early its insidious and deadly presence; one which, alas, is too frequently overlooked, and even unsought for; and one which it is most essential for the diagnostician to eliminate by a thorough recto-sigmoidoscopic examination,—I refer to cancer.

In this disease bleeding occurs earliest when the growth is near the anal orifice. It is then seldom very copious, and more apt to come from co-existant internal hemorrhoids. A short time ago I saw a man who had had his hemorrhoids removed about a month ago. No examination of the parts above the hemorrhoidal area had been made. All his symptoms grew worse after the operation. My examination disclosed an inoperable cancer encircling the rectal cavity just above the site of recent operation. Neglecting to make a digital examination had led to the error.

Cancers of the rectum, unlike those in the mobile sigmoid and colon, being in a fixed organ readily become traumatised by passing hard fecal masses, and so become ulcerated early, with consequent bleeding. The bleeding is slight at first but, as the disease progresses, it becomes more profuse, and death has already occurred from exsanguination when a large blood vessel has been invaded.

Having discussed the many conditions which may give rise to rectal hemorrhage, we will conclude this paper by again suggesting that which the writer has repeatedly advised in former papers read before this and other medical societies, namely, always make a complete ano-rectal examination in every case presenting any symptoms referable to those parts. Above all else, make a digital examination. Rule out the possibility of cancer whenever there is rectal bleeding. Even when you feel reasonably assured that the cause for a sanguineous discharge lies in internal piles never operate until you absolutely know that cancer, ulceration or

benign growth is not existant above the hemorrhoidal zone.

Always use the greatest care in making a rectocolonic examination after a recent hemorrhage. Even though skilled in the use of the sigmoidoscope, one sometimes finds it quite difficult to discover the exact spot from where the bleeding arises, and repeated examinations may be required before it can be located.

THE MANAGEMENT OF SURGICAL RISK. A REVIEW OF 100 KIDNEY AND PROSTATE OPERATIONS, AND 50 CASES OF ENLARGED PROSTATE NOT OPERATED UPON.*

By FRANK HINMAN, A. B., M. D., San Francisco.

Pre-operative, operative and post-operative periods of management of certain surgical cases are often so interdependent that careless attention to the details of any one may counteract an absolutely perfect execution of the others. Mismanagement brings disaster most frequently in cases with marked clinical abnormalities. The commonest abnormality in old men with enlarged prostates is renal disturbance, and the problem is similar to that which occasionally arises in renal surgery. The risks encountered in both will receive emphasis in a joint consideration. The operative, clinical and therapeutic forces which control surgical risk may be outlined as follows:

I—Operative Conditions, depending on
- A, Region operated and Type of Operation.
- B, Surgical Technic and Team Work. (Skill of performance on the part of the surgeon, surgical assistants and nurses.)
- C, Anaesthesia
  - Choice
  - Skill of Administration
  - Duration.
- D, Complications
  - Operative
  - Post-operative.

II—Clinical Conditions, depending on
- E, Age of the patient.
- F, Physical Abnormalities
  - Cardiac
  - Renal
  - Cardio-renal
  - Diabetes
  - Anemia
  - Infection.
- G, Physical Reserve or Stamina.

III—Therapeutic Conditions, depending on
- H, Methods and Period of Preparation,
  - Preliminary
  - Pre-operative.
- I, Methods of Post-operative Treatment.

The present consideration will be confined to an analysis of therapeutic conditions.

One hundred and four surgical cases and 50 contemporary prostatics who have not been operated (in the two years 1915-1916) furnish the basis for the following review of methods of management. The prostate was enucleated by the perineal route in 49 and suprapubically in two cases. There were 24 nephrectomies, 8 nephrotomies, 3 ureterotomies, 2 pyeloplasties, 3 lumbar drainage cases, 5 pyelotomies, 2 ureterectomies and 6 nephropexies. There have been two operative deaths in the series, a mortality of 1.9%, both of which followed prostatectomy, giving an operative mortality of 4% (51 cases) for the prostate and no mortality for the kidney cases. Five of the prostatics (2 cancer) and one case of advanced bilateral renal tuberculosis (general phthysis) have come to death since operation, a final mortality, in two and one-half years, of 14% for the prostates and 0.1% for the kidneys. Nine of the unoperated prostatics (1 cancer) have died in the same period of time. An unoperative mortality of 18% deserves an honest scrutiny of these two probable factors: delay of the patient in seeking treatment until the condition has become practically hopeless, and the particular method of preparation.

The one complication in both prostate and kidney cases which deserves serious consideration is infection. In the prostate series urinary infection was practically universal. In 29 of the prostatectomy cases the pyuria was severe and present in a milder form in 12 others. In the milder forms infection is usually limited to the bladder and urethra, but in the severe types ureteritis, pyelitis, pyelonephritis or pyonephrosis is probable. This was proven by ureteral catheterization before operation in four cases and on the post-mortem table in all of six of the nine unoperated fatalities. These kidney and bladder infections may show exacerbation during the period of preparation or following operation, and lead to a speedy end; or may continue in a chromic form for months or years and eventually overcome local tissue resistance or reduce general resistance and initiate secondary infections elsewhere. The autopsies of two cases which lived almost a year after operation, showed cystitis, ureteritis, pyelonephritis, enteritis, colitis and broncho-pneumonia. In all but five cases of the unoperated series pus was present in the urine microscopically. Of the nine cases which have died each of the six necropsies showed a pronounced cystitis, ureteritis, and pyelonephritis. Three had a terminal broncho-pneumonia and one a lobar pneumonia. Endocardial vegetations were present in two and the myocardium showed inflammatory changes in three of the cases. In the other three fatalities the clinical evidence pointed to similar pathologic conditions, clearly to a cystitis, ureteritis and pyelonephritis.

The seriousness of urinary infection in kidney surgery is closely related to that of prostatism. This was impressed by an early experience as House Resident. A pyelotomy for stone was highly successful from an operative standpoint, but there was a persistent post-operative temperature, leucocytosis and every clinical evidence of severe sepsis. The streptococcus was recovered from the urine and the wound drainage. Probing with a clamp failed to open any retention abscess. Examination after death on the fifth day showed an acute bilateral pyelonephritis with ureteritis

* Read before the Surgical Section of the San Francisco County Medical Society, August, 1917.

and cystitis. Excluding cases of infection of the surgical kidney there remain seven of this series in which a pyelitis or pyelonephritis imperiled the activity of the good kidney. Three other cases had bilateral stones and severe infection with small choice as to the better side; three others, bilateral tuberculosis, in two of which, however, the involvement of the supposedly healthy side was evidenced only by a positive guinea pig, function and urine being normal. Of the 50 cases, 53 kidney operations, 17 had bilateral disease.

The therapeutic management covers preliminary (preparatory, pre-operative) operative and post-operative periods, and comprises general and special procedures. The general principles of the management of clinical conditions belong more strictly to the field of internal medicine. The advice and judgment of a good internist is inestimable. The determination of cardiac, renal or cardio-renal involvement necessitates careful and repeated examinations, blood pressure records, cardiograms, renal functional studies and, in order to place the relative responsibility of the heart or kidneys in the final determination of cardio-renal cases, numerous therapeutic tests. Treatment will be in accord with the picture developed by these clinical and laboratory findings. It is important that the clinical and laboratory studies be continued throughout the course of management so as to control treatment. A routine procedure for all cases should be regarded as pernicious. Each case needs to be managed on its own merits. The relatively normal case deserves as jealous attention to the details of management as the severe clinical risk. The two operative deaths of this series were regarded as fair risks from the clinical standpoint. In old prostatics the clinical pictures are complicated by the influence of urinary back pressure. For this reason the first impression of grave cardiac or renal insufficiency may prove upon catheter relief of obstruction to be a manifestation of no great consequence. True nephropathies and cardiopathies have often preceded the disturbance from back pressure and with infection superadded present a grave prognosis and require prolonged and careful preparation. The improvement during the period of preparation is an indication of the ability to carry the burden of the cardiopathy or nephropathy after prostatectomy.

Preparatory management: The special procedures in the preparation which belong more strictly to the field of urology deal with the problem of urinary retention and urinary infection. Internal antiseptics and sedatives, urethral catheterization, cystotomy drainage, and ureteral catheterization comprise the methods which are variously used by urologists and which have undoubtedly contributed very considerably to the remarkable reduction in the mortality of prostate and kidney surgery in recent years.

The only internal urinary antiseptic of any particular value is hexamethylenamine. In order to manifest antiseptic action a certain concentration for a period of exposure in an acid urine is required. At least 15 grains by mouth three or four times daily are necessary even in favorable cases and then its short stay precludes antiseptic power in the renal pelvis, except possibly in certain hydronephroses or conditions of concentrated excretion. The excretion of the drug is influenced by extrarenal and intrarenal conditions, the important ones being, respectively, a partial conversion into formaldehyde with a commensurate loss for the urine in the acid contents of the stomach, and a limited excretion by the kidneys proportional to the amount of normal secreting tissue. It will be seen that the prostatic is a most unfavorable case for hexamethylenamine therapy. The gastric irritation frequently caused by it antagonizes important dietary regulations which are so essential in the management. (The drug may be given in salol-coated capsules by mouth or by proctoclysis or rectal suppositories.) In cases of renal insufficiency it not only is useless because of the delayed and scanty output, but adds another excretory load to an already overburdened kidney. In the bladder, where normally it has its greatest usefulness, catheter drainage before and perineal or suprapubic drainage after operation almost completely nullifies its action. In addition, the ingestion of large quantities of water, which the general treatment of these cases so frequently demands, dilutes the drug by diuresis sufficiently to destroy antisepsis. In renal insufficiency cases, acid sodium phosphate, which in other cases may be used with advantage in conjunction with hexamethylenamine to increase urinary acidity, tends to increase an already dangerous blood acidosis. In most unilateral surgical kidneys, however, hexamethylenamine has advantages. In the majority of these cases the bladder functionates normally and the drug is excreted in double concentration by the hypertrophied healthy kidney, and probably exerts considerable prophylactic and curative bacteriostasis for the healthy kidney and for the bladder, but it is of little benefit to the diseased side.

Methylene blue in doses of one to five grains three or four times a day is of value in certain staphylococcic and streptococcic infections; as it is bacteriostatic to staphylococci in dilutions of 1 to 150,000, but it also tends to upset digestion. In the prostatic and in a large proportion of surgical kidneys, urinary infection is best treated by external urinary antiseptics and germicides by means of a urethral or ureteral catheter.

Certain other drugs with no claim to antisepsis are of value for their sedative and alkaline properties. In certain types of vesical or urethro-prostatic irritation and congestion simple bicarbonate of soda affords considerable relief. The "bladder mixture" of tincture of hyacyamus and potassium citrate is often invaluable. When required the bromides and other hypnotics should be used. Even the occasional urethro-vesical instillation of novocain by affording a few hours of rest will mark the beginning of the up-grade. In these irritable conditions the regulation of fluid intake is sometimes helpful; limitation of fluids in cases without much infection in which bladder rest brings relief, forced fluids, in others, for purposes of autogenic lavage.

A great deal has been written of the value of catheter preparation of prostatics, but little in regard to the details of such preparation. A num-

ber of cases of this series illustrate the grave dangers of catheter mismanagement. It is probably fair to state that these examples of a better hindsight occurred in the general service of charity hospitals and none in private practice. Case 36, Group II, entered a public ward with a residual of less than 100 cc. and a renal function that was practically normal. He was urinating every ½ to 1 hour, however, and was almost worn out. The interne placed a retention catheter which was frequently withdrawn by the patient only to be promptly replaced by an orderly. A pronounced urethritis and cystitis developed. Loss of sleep and worry quickly undermined the patient's resistance, and neglect of the bowels for four days hastened the course downward. A (ascending) renal infection developed and the patient died of a terminal pneumonia less than one week after admission.

The institution of catheter treatment should be made with strict attention to the past history and general clinical condition, the amount of residual, the degree and duration of urinary infection, the severity of urethro-vesical irritability and such vesical complications as stone, diverticulum, and tumor. The chief objects are to relieve any disturbance of renal function from back pressure and allow of kidney readjustment to the unaccustomed state of urinary freedom; to control or limit urinary infection, and, occasionally, simply to reduce urinary difficulty and frequency. The two methods available are continuous and intermittent catheterization. The choice will depend upon which method will be better borne by the patient and will more efficiently secure the desired result. Often they can be used alternately to advantage. Catheter treatment is not indicated in every case, but there will be few cases in which in some form it can not bring pre-operative benefit. Catheter life is well known to be precarious and carries a mortality of 15 to 20 per cent. It should never be started unless from necessity, except as a means of preparation for operation; for once begun it frequently can not be safely stopped. The present consideration deals strictly with pre-operative conditions.

Cases of large residuals (over 300 cc.), irrespective of bladder capacity, urinary infection and renal function; cases of small residuals with small bladder capacity, and most cases with pronounced pyuria, irrespective of residual and bladder capacity, are amenable to catheter treatment. The retention catheter is generally better suited to large residuals and interval catheterization to the others. The very large residuals should be relieved gradually because back pressure may have produced pelvic dilatation with resultant compression of the blood vessels of the renal pedicle, and any sudden relief might result in a dangerous renal hyperemia and congestion. For the first few days, therefore, the catheter should be plugged with a cork and the bladder emptied at intervals of every two to three hours. Each time a thorough bladder irrigation should be given, and 50 per cent. of the then bladder capacity left in until the next interval irrigation. Uninfected cases with large residuals demand extra care to combat the onset of infection when put upon catheter life. The case with a small contracted bladder requires frequent irrigations in an effort to enlarge and dilate the bladder.

Stiff gum catheters (silk woven) are preferable and those with a single or double elbow pass easiest. The use of a Benique obturator (prostatic stylet) is frequently required. Thorough irrigation and local anesthetization of the urethra should precede each catheterization. The catheter must be smooth, sound, and well lubricated. It should be passed slowly and without trauma. Internes and orderlies should be taught to catheterize without the use of sterile rubber gloves, which give a false security of asepsis.

Generally bladder irrigations, followed frequently by instillations, are essential in the care of a catheter after its insertion. The gravity method by which one to two liters of solution may be run in is much preferable to the syringe, except in certain cases in which bladder dilatation is desired. Boracic acid which is bland and non-irritating should be used oftenest. Potassium permanganate, bichloride of mercury, silver nitrate, and other antiseptics may be used in certain cases. An instillation after a boric acid wash of some one of the non-irritating germicides is of great value. One-half to one ounce of argyrol, 5 per cent.; silver iodide, 5 per cent.; protargol, ½ of 1 per cent., etc., may be injected into the bladder and retained as long as convenient. Goulay's solution (1/10 per cent. of acetic acid and potassium acitate) is beneficial in some colon infections. With certain strains of bacillus coli instillations of solutions of the bacillus bulgaricus considerably relieves irritability and often permanently lessens infection. It is advantageous to use a different substance for instillation each day so that the organisms are given no chance to acquire a drug immunity. It is very important to carefully watch the condition of the urethra. Injections at the meatus alongside the catheter may be given once or twice daily in order to keep the urethra in a clean and healthy condition. Care should be taken not to use too strong or irritating solutions. Upon the evidence of urethral discharge or irritation the catheter should be withdrawn and left out three to four hours before replacement; or, periodic catheterization may be substituted for a few days, the urethra meanwhile being treated by irrigations or injections. It is a safe rule never to retain a catheter longer than three to four days, no matter how successfully it works, without removing it in order to cleanse and treat the urethra. Epididymitis is almost invariably the result of an antiperistalsis of the vas deferens induced by reflex stimulation of an inflammatory or irritated colliculus.

The frequency with which irrigations and injections are used must be regulated by the type and severity of the infection that is present. With little or no infection, twice daily is as long an interval as is safe, and it is well to follow one of these daily irrigations by an instillation. In badly infected cases, irrigations every three hours, alternately, of boracic acid and potassium permanganate;

each boric irrigation followed by a vesical instillation, is advisable.

Catheterization treatment requires a great deal of work day and night. A few hours of neglect will offset weeks of care. Without sufficient and trained assistance the surgeon is powerless, and the case will be far better without the risk of catheter treatment. Under such circumstances suprapubic cystotomy is the better choice from the beginning.

Suprapubic cystotomy: Under ideal conditions suprapubic drainage is rarely required in the preparation. Its advantage, as shown by the results obtained by men who perform cystotomy as a routine in all cases of suprapubic enucleation has not been proven. Cases, however, with marked urethrovesical infection and irritability, with calculus, tumor or infected diverticulum in which catheterization is difficult, painful and inefficient should have early suprapubic drainage established. Of the three cases in which this was done in this series not one survived. The cases, however, were all critical and furnish no potent argument against cystotomy. Skillful catheter treatment offers equal advantages for combating infection. Cystotomy is only to be preferred when the necessary assistance for proper catheter treatment is not available and, occasionally, when bladder complications exist.

Renal lavage: The virtue of renal lavage in non-tubercular infections of the kidney is universally recognized. It is practiced almost exclusively by urologists, and, by them as a class, with unpardonable infrequency. The wisdom of the preparatory treatment of an infected kidney before removal of its functionless fellow is indisputable. It is rare that emergency surgery obtains in kidney work, and a week or ten days of such preparatory management will ward off an occasional post-operative collapse of an organ upon whose healthy activity the very life of the patient depends. In cases of bilateral infections with bilateral stones the establishment of local immunity is essential. Operation in the presence of leukocytosis and fever is precarious. Ureteral catheterization and renal lavage, by dilating the strictured and diseased ureters and establishing better drainage, and by combating the infection, will greatly reduce surgical risk. It will be seldom that ureteral catheterization can be done in the presence of an intravesical hypertrophy, but its advantages in cases of pyelitis and pyelonephritis are obvious.

It was done in two cases of this series which suffered an acute exacerbation during preparatory treatment. The kidneys were lavaged with one per cent. silver nitrate, twice in one and four times in the other, with great benefit in both. A word of caution is excusable. Cystoscopy in cases with very large prostates is difficult and may produce severe reactions. Successful ureteral catheterization in any event would be improbable. It is essential that trauma be avoided. No. 18 F. single catheterizing cystoscope occasions the least disturbance. The results in the two cases mentioned justify the more general use of this method of combating renal infection in the preparatory treatment of enlarged prostate cases.

Pre-operative treatment: Surgeons have begun to realize the error of pre-operative purgation. It weakens the patient and leaves the bowels in a partially paralyzed condition. (Alvarez.) Recall your own individual physical depression immediately following an unusually efficient cathartic. This intestinal mal-treatment carries a real danger in renal surgery in which rough handling of the kidney pedicle may injure, functionally, at least, the sympathetic centers which largely control intestinal paristalsis. There was no instance of pseudoparesis of the bowels after any of the 53 kidney operations of this series. It is believed that the interdiction of a purge immediately preceding the operation is largely responsible. Reasonable catharsis, two to three days before, with an enema on the preceding night and morning, is much more logical. With this precaution the post-operative use of eserin or similar drugs to stimulate intestinal paristalsis are superfluous.

It has also become a surgical custom, largely on the plea of anesthetists, to add to the mental torment of the patient about to be operated that of physical thirst by refusing him all fluids from midnight on. This cruel treatment is not only unnecessary, but, in the type of cases under discussion, adds greatly to surgical risk. Water is the most efficient and safest diuretic and was given in both prostate and kidney cases right up to the time the patient was taken to the operating room. In the event of the operation being scheduled late in the morning or early in the afternoon, a cup of weak coffee or a glass of milk and a cracker may safely be allowed in the early morning upon awakening. This treatment not only gives them physical satisfaction, but insures a continued fluid stimulus to the kidneys during a period when it is most needed. There has been no instance of vomiting during the operation and no increase afterwards. There has also been no instance of post-operative anuria.

Operative management: The judicious placement of thorough drainage at the operation will most effectively combat post-operative infection. This is vital to success in kidney surgery. Rubber tube drainage is the most efficient. In nephrotomy, pyelotomy or plastic pelvic surgery in the presence of infection, the placing of small rubber tubes through the kidney substance into the pelvis, which may thus be irrigated at intervals, has given gratifying results. In several instances of infected nephrolithisis a small rubber urethral catheter was passed through the nephrotomy opening down the ureter for several cms. with perforations at different levels in the pelvis. Through this catheter ureteral and pelvic irrigations were given with complete cure of the infection. In another case of infected hydronephrosis and stone a pelvic plication was completely successful because of the ability to combat the infection through a catheter similarly placed. In some of the cases of bilateral infections where little secreting kidney tissue is left, and what there is must be most carefully preserved, such measures are indispensable.

Post-operative management: Infection still remains the great problem of post-operative management. It is a mistake after operation to leave the patient to combat his urinary infection unassisted. Urethrovesical irrigations and instillations with, in

some cases, periodic catheterization for purposes of more thorough vesical lavage, and, in cases with kidney infections, ureteral catheterization and pelvic instillations, are indicated. The facts definitely declare in favor of such persistent urologic after care. The two late deaths following prostatectomy, with their pictures of cystitis, ureteritis and pylonephritis, the known tendency of infection to lead to stone reformation after nephrolithotomy, demonstrate that the responsibility of the urologist does not cease upon discharge of his patient from the hospital.

Summary: The preliminary, operative and post-operative periods of treatment of prostate and kidney cases have an interdependent and equal value. Neglect of the details of any one may destroy the success expected in a perfect execution of the others.

Urinary infection is the most prevalent complication for treatment in each period of management. The majority of late fatalities are secondary to a refractory or untreated urinary infection.

The methods of management comprise general and special procedures. The former belong more particularly to the realm of internal medicine and will vary according to the clinical complication present. The special methods have been developed largely by urologists and comprise urinary antiseptics, urethral catheterization and urethrovesical therapy, cystotomy drainage, operative drainage and ureteral catheterization with renal therapy.

No satisfactory internal urinary antiseptic is known. Hexamethylenamine is the most efficient. In conditions of prostatism, however, bladder drainage and forced fluids largely nullify its value, and a true nephropathy, which so frequently co-exists, contraindicates its use. It has considerable prophylactic value in renal surgery.

The use of the urethral catheter is dangerous except under continuous supervision and in expert hands. Without experienced management the many grave complications that are likely to follow offset its anticipated advantages. Prostatic cases should not be subjected to preliminary catheter treatment indiscriminately nor as a fixed routine. There will be a small number of cases which will do better with no catheter treatment of any kind. Retention or periodic catheterization should be selected according to the individual indications and they can frequently be used alternately to advantage. Frequent urethral and bladder irrigations with non-irritating antiseptics are essential in the care of the catheter. Boric acid alone is unsafe, and while best adapted for general use should be supplemented by argyrol, potassium permanganate, bichloride of mercury, formalin, etc.

Cystotomy drainage will be demanded in relatively few cases, usually those complicated by vesicle stone, tumor or diverticulum. With inexperienced help cystotomy drainage is safer than urethral catheter drainage.

Severe purgation and the limitation of fluids just preceding operation are obsolete surgical habits, particularly apt to be pernicious in prostatic and renal surgery. Better results will follow the giving of the cathartic several days before operation and of fluids up to the moment the patient goes to the operating room.

The intelligent placement of rubber tube drainage at the time of operation will often prevent many grave post-operative complications and enable other complications to be safely treated.

Ureteral catheterization with dilatation of the ureters and pelvic lavage should be made use of frequently in the preparatory and post-operative treatment of renal infections complicating prostatic and kidney surgery.

516 Sutter Street.

ACUTE GASTRO-DUODENAL PERFORATIONS.*

TREATMENTS, DIAGNOSIS, REPORTS OF SIX CASES, FOUR RECOVERIES.

EDMUND BUTLER, M. D., San Francisco.

About fifteen per cent. of gastric ulcers and about twenty-five per cent. of duodenal ulcers rupture, according to Allaben, in the Illinois Medical Journal, 1909. Musser maintains that 28.1% of all ulcers perforate. Ulcers are more frequent in the male, and perforations occur in much greater proportion than in the female. Acute ruptured ulcers are most often located on the anterior wall of the stomach and first portion of the duodenum. The histories of cases of acute rupture are all somewhat similar. Previous gastro-intestinal disturbance may or may not be a part of the history. It is difficult and often impossible to get a satisfactory history from patients suffering from a ruptured ulcer.

The history in the chronic perforations may be misleading, but it is not in these cases that an error in diagnosis is so disastrous; so in this paper, only acute perforations will be considered.

Given a history of acute, severe, knife-like pains in the pit of the stomach, with or without previous indigestion, coming on when the stomach is empty or full, taking place while the patient is at rest or at work, acute perforation must be considered. Vomiting occurs usually shortly after the rupture, regardless of the location of the ulcer. Blood is very seldom noted in the vomitus. Vomiting is more continuous following duodenal perforations. Constipation is the rule, but a bowel movement hours after the perforation is possible with a mild peritonitis. The sudden, severe pain is not influenced by large doses of morphia. Later, when the patient becomes toxic from absorption, morphia is very effective for the relief of the agonizing, gnawing pain of that stage. The location of the pain is in the pit of the stomach.

Examination of the patient during the early hours of the condition. The patient as a rule assumes the dorsal position, crying for relief from the pain. The thighs are flexed upon the abdomen. Beads of perspiration stand on the brow. The face is not anxious, but gives evidence of great distress. The breathing is thoracic in type, and slightly more rapid than normal. The abdomen is retracted, rigid and board-like. The rigidity is most marked in the epigastrium. The tenderness is most marked in the region of the rupture

* Read before the San Francisco County Medical Society, October 16, 1917.

in the upper abdomen. Pressure on any part of the abdomen causes epigastric pain. The arches of the ribs are rigid. Tympanites is absent. Later, as peritonitis progresses, distension and dullness in the flanks are present. Liver dullness is of no value in the early diagnosis. It is a difficult procedure to percuss accurately the liver, because of the extreme muscular rigidity masking the note. A variable note is transmitted from the greatly compressed hollow viscera. Rectal examination is negative in the early stages. The pulse is normal or slightly accelerated. Temperature is normal or slightly raised. Blood pressure is unchanged for the individual. Blood count shows a rise in the polymorphonuclear coming on very shortly after the rupture. The correct diagnosis is often overlooked because the vomitus does not contain blood, the liver dullness is present, and shock is absent. Not one of these findings is essential to a diagnosis of ruptured gastric or duodenal ulcer.

The peritonitis often rapidly extends down along the gutter formed by the ascending colon and lateral abdominal wall and a point of great tenderness is found in the region of the appendix. This is particularly true in duodenal rupture. It is often difficult to make a correct diagnosis, but it is imperative to make a diagnosis of an acute surgical abdomen, and not that of beginning appendicitis, to be treated expectantly by Ochsnerizing. With the history of acute, severe pain in the pit of the stomach, plus board-like abdominal rigidity, a diagnosis of acute ruptured ulcer should be made, to be substantiated or disproved by other findings.

Acute pancreatitis, acute phlegmonous cholecystitis with or without rupture, mesenterio-thrombosis, acute gastric dilatation, gastric crises in tabes dorsalis, food poisonings, appendicitis, ruptured ectopic pregnancy, and traumatic rupture of interabdominal viscera, are the usual conditions which have to be considered in the differential diagnosis.

In acute pancreatitis, shock, cyanosis, and the grayish color of face develop very rapidly. The upper abdomen is less tender and the rigidity is less marked. Especially is thus true while the inflammation is confined to the lesser sac.

In phlegmonous cholecystitis, the tenderness is in the right hypochondrium. The tenderness and the pain remain more localized. There is no spreading of the peritonitis. If the gall bladder is ruptured, it would be very difficult to differentiate by the signs and symptoms, but a definite history of previous definite gall bladder disturbance would be valuable.

In mesenterio-thrombosis, the evidence of thrombosis in other parts of the body, the absence of the scaphoid abdomen and marked rigidity, together with the presence of rapidly developing shock and tympanites, should rule out ruptured ulcer.

In pneumonia, the examination of the chest should make the diagnosis.

Acute gastric dilatation gives a "doughy" abdomen. The character of the vomitus is pathognomonic. Shock is an early phenomenon.

In gastric crises, the history, other signs of tabes, absence of rigidity and definite tenderness, should guide the diagnostician.

A history of indiscretion in diet, vomiting and For the rupture may be located in the stomach signs and the presence of shock, should be helpful in diagnosticating food poisoning.

In traumatic rupture of a hollow viscus, the history only would be an aid in differentiating. diarrhea, the absence of characteristic abdominal or the duodenum, and the clinical pictures are identical.

In appendicitis with perforation, the late stage is very difficult to distinguish, for the clinical picture is the same, but the history of the early attack should be valuable. Early in the attack the mistake should not be made.

In ruptured ectopic pregnancy, the blood examination shows a low hemoglobin, a low red count and a moderate polymorphonuclear leucocytosis. The pelvic examination and the history are the main diagnostic aids.

The treatment of acute, perforated ulcer is surgical. Deaver states that the mortality is 99 per cent. in cases not treated surgically. Immediate laporotomy without waiting for shock to subside, is the treatment indicated; for if shock is present, it speaks for the extreme seriousness of the case, and is all the more reason for haste. The choice of the incision is left to the operator. The long median epigastric incision causes less bleeding, may be more rapidly and securely closed and gives plenty of room. A rapid search should always be made for other perforations. The technique of closing the perforation and the suture material used is not of so much importance, as long as the perforation is securely closed and the gut is not obstructed. A purse string suture of catgut, reinforced by several interrupted catgut Lembert sutures, is sufficient, if the induration permits of infolding. A double row of Lembert sutures of catgut closing the perforation, and the additional tacking of the greater omentum over the suture line, is about as secure a procedure as could be suggested. An occasional perforation is found which it is impossible to close. Then some adjacent viscera may be used. Downs used the gall bladder, others have used the omentum. Large gauze packs down to the perforation leading out through the wound have been used.

Flushing out the peritoneal space is not advisable. Cultures made from this fluid, the greater part of which is peritoneal exudate, are as a rule negative or give growths of streptococcus or staphylococcus of low virulence, as indicated by investigations of Cushing and Livingood and of Dudgeon and Mayberry. Flushing prolongs the operation, chills the patient and necessitates a great deal of unnecessary handling of bowels and injury to the peritoneal surfaces. An occasional case may require sponging or aspirating, where food is present in great quantities, but eviseration and irrigation is seldom indicated.

(Concluded in May issue.)

Book Reviews

A Text-Book of General Bacteriology. By Edwin O. Jordan, Ph. D., Professor of Bacteriology, in the University of Chicago and in Rush Medical College. Fifth edition thoroughly revised. Octavo of 669 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, $3.25 net.

Since the enthusiastic reception accorded the first edition of this attractive text-book, no less than ten reprints and revisions have been justified by the demand for Professor Jordan's work. This fifth edition has all of the material that made the preceding editions so valuable as elementary and intermediate texts and has some additional material on the classification of pneumococci, on mouth entamebae, on the Schick reaction, Hodgkin's disease and other matter that presents new aspects. Further than this it seems hardly necessary to dilate upon the merits of this very well known and well liked class-room manual. G. H. T.

Surgery and Diseases of the Mouth and Jaws. By V. P. Blair. 3rd edition. St. Louis: Mosby. 1917.

Major Blair has been made head of the Subsection of Oral and Plastic Surgery in the Medical Department of the Army.

The new edition of his excellent treatise contains numerous additions. The chapters on the repair of defects and plastics have been elaborated, and considerable material on gun-shot injuries and military dental surgery has been added.

The book is singularly complete. We need not call it to the attention of dental surgeons—it is already their standard guide. We would, however, heartily recommend general surgeons to study it. They will gather many new ideas and a much-needed knowledge of what we owe to dentistry in the surgery of the face, jaws and tongue. L. E.

The Prescription, Therapeutically, Pharmaceutically, Grammatically and Historically Considered. By Otto A. Wall, fourth edition. St. Louis: Mosby Company. 1917.

This book treats the prescription historically, pharmaceutically and legally. The author traces its evolution almost from the ape man to the present day. He dissects it thoroughly and discusses each part in detail. He does not treat the legal status as thoroughly as we might wish. Perhaps he is wise in this. There are so many conflicting court decisions regarding the ownership of a prescription that the question seems to belong in the "how old is Ann" class. The book is one which will help every physician and pharmacist who reads it. The older practitioner will find it interesting and instructive with nothing pedantic about it, and the medical student who reads it carefully, will find added dignity in the scrap of paper called a prescription. F. L.

Hygiene of the Face and Cosmetic Guide. By Richard W. Müller, M. D. New York: Dutton. 1917.

Here is a subject of perennial interest to the laity especially to the feminine portion thereof. That the matter should be approached by a medical man so much in the method of the Sunday supplement is to be regretted.

The volume is a compilation of useful and useless formulae which the author is frank enough to state he has gleaned from many sources. "He has even read and taken from journals on beauty."

The volume is scarcely worthy of serious review. That a practitioner of medicine should attempt to stimulate the feminine habit of dabbing on chemicals to enhance beauty, when the practice is notoriously overdone already, is certainly to be deprecated.

To gain an adequate idea of the book one really needs to look no further than the publisher's notice on the outer cover whereon it is stated that with a little intelligent treatment wrinkles and spots may be kept at bay. One can imagine the keen-eyed seeker after beauty spying these alluring words on the cover, carrying it off in triumph and a few days later emerging with stacks of masks, vibrators and such creams for wrinkles as the author's mixture of lanolin, rose water and witchhazel. E. D. C.

Handbook of Gynecology. By H. F. Lewis and A. de Roulet. St. Louis: Mosby. 1917.

There is not enough original material in this book to warrant its publication. Here and there is a good suggestion, but there is too much detail in matters of minor technique. A lecturer could, by adding much of his personal experience, make this book the basis of a lecture or demonstration, but to expect others to adopt it is too much. M. I. J.

Impotence and Sterility with Aberrations of the Sexual Function and Sex-Gland Implantation. By G. Frank Lydston, M. D., D. C. L. Price, $4.00. Riverton Press, Chicago, Ill.

The reading of this masterwork was a pleasure and highly instructive, but to do it justice in a short review is rather a difficult task. From the first pages to the closing words everything is relevant and valuable. The author's enormous personal experience, his keen power of observation dominate every question. We mention the lucid descriptions of various forms of so-called hermaphroditism; the ingenious theory of explaining qualitative and quantitive psychic and physical aberrations and perversions by quantitative and qualitative perversions of the sex hormones; the dictum that it is probable that no man who had indulged in sexual congress or masturbation to any degree prior to full maturity is ever possessed of normal sexual sensibility in later life; the conservative views in regard to masturbation and sexual excesses; another dictum that the sex gland hormone is the most important of all in the nutritive hormone cycle; the explanation of infertility in some marriages where both parties may later prove fertile by hormone incompatibility; the sane and practical views on matrimony; and, the most important of all: Lydston's experiments and splendid successes in sex gland transplantations. The author opens new horizons in regard to sterility in woman and the possible correction of some vicissitudes of human breeding. he raises many questions, and this work of his is sure to stimulate study and research of all-important endocrinology. Lydston hopes to succeed in greatly impeding the wheel of time in its remorseless grind upon human life. His experiments and experience justify him in saying, and we must agree with him, that therapeutic effectiveness of implanted cells is no more an open question. We hope that other surgeons will follow Lydston's lead, and strongly urge every physician to read this book. V. G. V.

Correspondence

FROM SURGEON U. R. WEBB, U. S. N.

U. S. S. Solace.

To the Editor:

Your letter of February 14 has just reached me. I was detached from duty at Mare Island and ordered to command the "Solace" a few days after writing you concerning the draft for physi-

cians, etc. Dr. Woodward has taken up that work, I believe. We still need physicians. The work increases with the expansion of the Navy. I wish I could write you of our activities, but the censor forbids.

Health conditions are good. Everyone works with enthusiasm, the morale is high, defeat is unthinkable.

With best wishes, sincerely,

U. R. WEBB.

CONCERNING AN EDITORIAL.

To the Editor:

I want to thank you for your little paragraph about the verb "to operate." "To operate" is "to work," and I have often thought when I have heard some of my confrères saying how they had "operated a patient" that they were unconsciously and in truth telling how they had "worked" him.

Very sincerely yours,

HARRY M. SHERMAN.

San Francisco.

SOMEWHERE IN FRANCE, NEAR WHERE THE CANNONS CAN BE HEARD,

January 29, 1918.

We are at present out in the woods getting back our health from the trip we had coming to this place. I wish now I had studied my French a little more before starting across. However, I am gradually learning the lingo. My teacher has just left on his gallant steed announcing that target practice is over for the day. They are all fond of American cigarettes and tobacco, these French soldiers that we come into contact with, quite often paying fabulous prices.

I have had cases of severe bronchitis, some measles, mumps, scarlet fever and bad colds: rheumatism, tonsillitis and a few operative cases for old troubles. The men got paid last night and were very happy as many had not received any for some months. The Red Cross has been very good to us, furnishing us with helmet caps, sweaters, socks, mufflers and wristlets. The Y. M. C. A. is doing lots for the soldiers and needs all the support you can give it. Have seen lots of country and strange sights which I hope to be able to tell you about in 19—.

If any of your friends happen to be coming across let me give you what I've found out personally: (1) Take along some magazines to read on the boat, as all may not have as good a library as we had on ours. (2) If they play cards, take some along, otherwise you pay dear for them. (3) Candy and gum must be taken. (4) Plenty of cigarettes and tobacco in general for smokers. (5) You can get better exchange for your money at the Y. M. C. A.'s most all the time. (6) Take plenty of changes of wearing apparel and have it handy as you may be separated from your luggage and it may be lost for some time. (7) Watch your luggage as much as possible, as you may have it at the end of your trip, not otherwise. (8) Learn your value of your new money so as not to get stung. (9) Baths are hard to get at times. (10) Eats, you will have to change your idea a whole lot. (11) Breakfast, they have the blackest of black coffee. (12) Milk is seldom partaken of if you believe in "safety first." (13) Sleeping accommodations are—sometimes you do and sometimes you don't, but soon your hips become accustomed to the beds. (14) Candies are high. (15) Wines and other liquors are reasonable, only sold at certain hours to the military. (16) High leather boots are worn considerable, also rubber boots.

(Signed) G. B. WILCOX,
162nd Infantry, Medical Depart.

SAN FRANCISCO POLYCLINIC WAR LETTERS.

Notes From Camp Lewis.

December 13, 1917.

Since coming to Camp Lewis my experiences have been wide. You know when a civilian enters the military the first thing they want to know is how to act. The acting will work if they know how to salute. This is particularly so if they have a uniform on. At first it was hard to pick a newcomer but now it is very easy. For instance a captain rushes up to you beaming all over, and saluting, wants to know where headquarters are and who is in charge. Immediately he is told to go to the Y. M. C. A. Building where Major Latrine holds forth, incidentally asking if he has an old umbrella. He will go and do as he has been told. Then about fifty men gather around for the fun. So much for the funny side of military life.

When first arriving in camp—the Masonic Ambulance Company from San Francisco,—and at that time known as Provisional Ambulance Company "B"—we were met by a Field Hospital Corps from Portland. If it had not been for them we would have probably starved. They fed our company for two or three days, got us located in tents and made us comfortable. After about six weeks of this we moved to the barracks which had recently been completed and stayed in there for about six weeks. We then moved to our permanent barracks in the sanitary trains.

The sanitary trains here comprise four ambulance companies, one of which is animal drawn and three motor drawn. Near the sanitary train is the Base Hospital, capable of holding 2000 cases. It has very fine equipment, is spread over a great area of ground, one-story wards.

The reservation here covers about 14,000 acres of maneuver ground. The barracks for the men will hold about 40,000 and are about three miles long by two miles wide. In regard to receiving instruction officers in Ambulance Companies must be able to command men, giving usual drill regulation, litter drills and command ambulance work, setting up stations, etc.

There are now several British and French officers in camp giving instruction in hand grenade, French mortar, rifle grenade and poison gas. Imagine men of Mendocino County putting on a gas mask in six seconds. The infantry are already passing through gas every day.

(LT.) RAYMOND A. BABCOCK,
Ambulance Co. No. 364, 316 Sanitary Train, Camp Lewis, Wash.

From Dr. Sterling Bunnell, Secaucus, New Jersey.

Since the first of the year I have been stationed at Hoboken, New Jersey, the port of embarkation, awaiting the arrival of our San Francisco unit. Have been at first given the job of learning army hospital management. It is most exact but a very smoothly running system when working perfectly. I am now established in the Army Hospital, Secaucus, N. J., not doing surgery, but taking care of my share of the 350 contagious cases and acting as supply and property officer for the hospital. Lieut. Harold Fletcher of San Francisco is one of us and there are but four of us doing the medical work of the hospital.

Recently I saw at the Rockefeller Institute, Dr. Fred Allen of San Francisco carrying out his exhaustive experiments on diabetes. He has done a

tremendous amount of work. I also saw Dr. Jacques Loeb and he showed me his two dozen full grown fatherless frogs that he had produced by merely pricking the eggs. He also showed me aseptic flies that he had grown through forty-four generations aseptically. He finds that their longevity is not determined by bacterial flora as thought by Metchnikoff but is determined directly by the temperature. This temperature curve is the same temperature curve he finds that governs the degree of chemical reactions.

Have enjoyed meeting the members of the Stanford unit who were delayed in Philadelphia and New York because of their equipment going astray. It is a mighty good unit with many representative men in it.

From Dr. Walter S. Johnson, Base Hospital, Camp Kearny.

The Surgeon General's office at Washington assigned me to duty at the Base Hospital, Camp Kearny, in connection with venereal diseases, and I am in charge of this department. It is a very large service and the venereal incidence at one time was a gigantic problem. The great bulk of the work came before our base hospital was completed and a temporary hospital was under canvas. Supplies for carrying out our work had not arrived and the task of having to care for so many taxed the ingenuity of most of the medical and surgical staff.

My operating table was made by sawing a few two by fours for the legs, and twelve-inch rough floor boards for the top, the top being made somewhat trough shape to facilitate drainage. Instrument tables were made of the same material, as were benches, desks and other furniture necessary for operating or treatment.

Our methods of sterilization were also very crude. Alcohol stoves were furnished and a new tin wash basin made a very good boiler for instruments. Towels soaked in bichloride were the only means of protecting the field of operation. God was good and strange to say, infection was not known. Under these adverse conditions, two hundred complicated cases were in the department as bed patients and we were treating three hundred and fifty in the outclinic Genito-Urinary Department daily, with a medical personnel of six reserve medical officers. Our nurses and hospital corps were men fresh from the ranches, which means that they were raw recruits.

At the present time we are housed in our new Base Hospital and we are getting supplies continually and will probably get more when they cut out some of the army red tape.

The work means long hours, hard, but very interesting work and our experiences are making us fit for any service. Many of us look back to those independent days of civil practice longingly, but the watch word is play the game and play it with the best that is in you.

From Dr. Bruce Ffoulkes, Camp Funston, Kansas.

I arrived M. O. T. C., Fort Riley, Kansas, on June 1st. There was no one at the station to meet us as guide, so we wandered around the post trying to orientate ourselves. We found that we were in a reservation of 22,000 acres. The distance of a mile between buildings was the rule rather than the exception. After lugging our suit cases and overcoats for about two hours, incidentally on account of the heat, our white collars were warped and our personal appearance generally mussed up, we located the Adjutant's office, at which we registered.

They registered our name, age, specialty, previous service, if any, maiden name of any female relative in case of homesickness, name of our grandmother's special brand of fruit, and who to ship the remains to in case of sudden death. This being concluded, we were directed to walk north and east about two and one-half miles to our quarters. On arriving at above named quarters, we found it to be a large, two-story, stone building of imposing aspect with windows and doors barred with three-quarter inch iron bars. Inquiry brought forth the information that the building was the Artillery guard house, temporarily turned over for the use of the Medical Officers in training until the cantonment would be built. Imagine the awaking, when we expected two or three rooms and bath to find we were to occupy this building containing two large rooms of about one hundred by thirty feet with cots placed as close together as the dormitory of a girls' seminary.

Doctors began to arrive in twos and threes all morning until about noon there were thirty of us. About 11:30 that same morning a very soldierly First Lieutenant of the Medical Corps came among us and announced that 1 p. m. everybody was ordered to appear at the Infirmary. At the appointed hour we presented ourselves, were physically examined, vaccinated on the right arm and shot full of typhoid prophylactic in the left, then nonchalantly told, as it was Saturday, we had nothing to do until Monday morning. It was a good thing as by the next morning every one of us was sicker than a poisoned pup.

Monday morning reveille sounded at 5:15, and at 5:25 the roll was called. From that time on we worked from 5:15 a. m. until 10 p. m. You can imagine our feelings to be awakened at 5:15 a. m. when most of us had been in the habit of having breakfast in bed.

Monday morning we started to be taught according to the rule of the camp, every hour being taken up by recitations, study or exercises. We were taught making our own beds, drills, setting up exercises, army regulations, manual of the Medical Department, manual of court martial, paper work of the medical ordnance, Quartermaster Departments, sanitation, map making, tent pitching, incinerator construction, latrine construction, etc., ad finem.

The course of instruction extended from June 1st until September 1, 1917. After our company of doctors arrived, in all eighty-nine, which was designated Company I, the first jolt we received was to be formed into a regular company. The two major surgeons being designated the captain and lieutenant of the company, and seven sergeants and seven corporals, and the rest of the company privates. Yours truly was appointed first duty sergeant. It was quite a come down to be stripped of our rank and be known only as sergeants, corporals, and privates. My work started in by organizing a complete company and then after organization to teach the other medical officers of the different companies the duties of a medical officer in the field. By the first of July we had six companies of doctors and new companies were arriving about every ten days. When I left the training camp in September there were fourteen companies of about a total of 2000 doctors. I might say right here that the men who responded to the country's call were not young men, but middle-aged. The average was 39 years. This should make the younger men hang their heads in shame. What we need badly even today is young men in field service especially, for it takes young, vigorous, physically fit men to do the work they are called upon to perform. The eighty-ninth Division is commanded by Major General Leonard Wood, a fine officer, one who is loved by officers and men alike. We all take pride in the eighty-ninth and when we go over seas, expect to give a good account of ourselves.

State Society

PAYMENT OF DUES.

Keep the Man at the Front in Good Standing.

The 1918 dues should be readily collected this year, as we believe there is no valid excuse for any delay. We wish to call attention, however, to the very important matter of every County Society making unusual efforts to keep the members at the front in good standing by paying their dues for them. This appears to be the custom in many places throughout the country.—Journal of the South Carolina Medical Association, Jan., 1918.

DUES OF MEMBERS IN SERVICE.

There seems to be considerable misunderstanding concerning the recent ruling of the Council in the matter of dues from members who have entered military service. The resolutions in question were the result of repeated calls on the part of County Societies for suggestions from the Council.

Due deliberation was given the matter in Council meeting. It was fully recognized that these men who joined the colors were doing a heroic duty, and the State and County Societies are under obligation to them. All honor is due them for their sacrifice. The practical question still remains, however: What is to be done about their legal defense, their parent organization?

Malpractice suits will still be filed against our members regardless of their national service. Two years after having rendered medical service they may be sued, and must be protected. Their defense depends upon the continuance of their membership. Legal defense costs money. The Government will not protect them.

It is as important to keep up legal defense as it is to keep up fire insurance or to pay taxes. The money spent is insignificant compared with the benefit bestowed, and hardly represents a sum greater than most men spend in one evening's entertainment.

One's obligations, moral, financial, and social, do not cease with his entrance into the military service.

The County Society is only given a suggestion for which it asked. It is only a suggestion, not a demand. It can make any arrangement for payment of dues that it sees fit. Several County Societies have donated these dues from its treasury. Other State Societies have dealt with this question in a similar manner; some have asked for full dues; some have exempted their members altogether, but have been reimbursed by the component organization.

The machinery of the State office should be kept running. Medical organization and fraternity are worth the price. Pay your dues in full, and prepare to return home in peace and happiness.

DEL MONTE NOTICE.

Tickets will be on sale for the going trip April 14th to 18th incl., 1918.

Certificates will be honored for return, April 16th to 20th incl., 1918.

Tickets may be sold to either Asilomar, Del Monte, Monterey or Pacific Grove, and certificates will be honored at either Del Monte, Monterey or Pacific Grove, Cal.

The name of the Joint Agent who will sign and verify the certificates is Mr. B. F. Wright, Agent Southern Pacific Company, Del Monte, Cal.

Railroads who will honor tickets (get receipt certificates): A. T. & S. F. Ry.—Coast Lines; Northwestern Pacific Railroad Co., The Salt Lake Route, Southern Pacific Co., The Western Pacific Railroad Co.

Through tickets must be purchased at initial point in order to secure the benefit of the one-half fare returning.

Tickets must be purchased both going and returning on the authorized dates only.

Obtain from the Ticket Agent a receipt certificate when purchasing a ticket for the going trip, and secure a separate receipt for each ticket.

Where meeting is held at Del Monte, Monterey, Pacific Grove, or Asilomar, tickets may be purchased to either of these points and receipts will be honored at either place.

Receipt Certificates will be honored for "return" for continuous trip tickets ONLY, and only to the original starting point.

Where tickets cover passage locally, the return trip must be over the same route as going trip, or via any other route between starting point and destination authorized by tariff of issuing line.

Where tickets cover passage over two or more lines, the return route must be via the same lines and junction points as the going trip.

Each certificate must be properly filled out, signed by the Secretary of the meeting and stamped and verified by the Joint Agent.

Each certificate must: (1) Show that ticket for going trip was purchased for passage on an authorized sale date and at a station from which special fare is authorized. (2) Be presented to Ticket Agent at place of meeting (or other authorized point) for purchase of return trip ticket on an authorized date of sale.

All certificates must be presented to the Secretary of the meeting for his (or his assistant's) signature. The Secretary will then present all certificates, but not less than fifty (50), to the Joint Agent for verification, signature and official stamp. The Joint Agent will then return the certificates to the Secretary of the meeting for distribution to original holders. The minimum attendance required at each meeting, for which excursion fares on the receipt-certificate-plan will be accorded is a total of fifty (50) delegates or attendants holding receipt certificates—except that for conventions in the States of Oregon and Washington, a minimum of one hundred (100) delegates is required.

All Agents are supplied with receipt certificate form blanks.

All certificates must be presented to the State Secretary for his signature at registration desk.

COUNCIL MEETING.

At the 100th meeting of the Council, held March 16th, the question of dues from members in National Service was discussed at length.

It was the universal feeling that these men should be exempt from dues and that they should be given full protection with all the benefits of organization during their absence.

After deliberation the matter was left in the hands of the Publicity Bureau with instructions that the various County Societies be circularized; that delegates be given instructions to consider the many problems of the situation, and that the recommendation of the Council is that members in Military and Naval Service be unqualifiedly exempted from dues.

The question of reducing the running expenses of the Society was taken under advisement. Strict economy has been practiced in all departments, but legal protection and the Journal publication are the two big items of importance which can not be eliminated.

Other organizations have been investigated concerning their war policy, and data on this subject will be presented to the Delegates at Del Monte.

NOTICE.

Congratulations to the County Secretaries for their good work in getting in 1918 dues.

SECRETARIES OF COUNTY SOCIETIES

are invited to attend a secretaries' dinner at Hotel Del Monte, April 16, at 6 o'clock. At this time various subjects of importance will be discussed with the State Secretary, Dr. Saxton Pope. Further notice will be given at the hotel.

County Societies

ALAMEDA COUNTY.

Focal infection was the subject discussed at the bi-monthly meeting of the Alameda County Medical Association held on the evening of February 4th. A paper on "The Hidden Cause" was read by Dr. Walter R. Hughes. The doctor illustrated his paper by a number of lantern slides and brought out many interesting points in regard to the teeth as foci of infection. Dr. H. G. Chappel, Dr. A. O. Wright and others discussed the paper.

Dr. A. Galbraith gave a brief talk on the tonsils and areas in the nose and accessory sinuses as locations from which infection may be spread through the system.

Dr. Strietmann, who was to have considered the subject from the standpoint of the internist, was unable to be present.

Members of the Alameda County District Dental Society were guests of the Association.

The Merritt Hospital Staff Council of the Samuel Merritt Hospital of Oakland held its annual meeting February 18, 1918. The following officers were elected: Dr. A. Galbraith, President; Dr. Sarah I. Shuey, Vice-President; Dr. R. A. Glenn, Secretary-Treasurer. Refreshments were served and a social evening was enjoyed by all.

The regular monthly meeting of the Alameda County Medical Association was held on Monday evening, February 18th. Instead of a scientific, a more or less popular program was presented, the meeting taking the place of the annual banquet. Dr. T. W. Huntington of San Francisco spoke of his experience on the Italian battle front with the Red Cross. Mr. W. J. Wheeler gave some selections from the "Rhymes of the Red Cross Man," by Robert Service; and Captain Goord, of the British Army, gave some of his experiences on the French front. Following these very interesting talks a buffet supper was served.

The annual meeting and banquet of the Alameda County Anti-Tubercular Society was held at the Hotel Oakland, Oakland, Thursday evening, February 28th. Aside from it being a successful social function the reports of the officers show that the society is steadily growing and that much good work is being done. The following members were elected to serve as officers for the ensuing year: Dr. Chas. E. Snook, President; Mr. Harrison S. Robinson, First Vice-President; Mrs. Allen G. Freeman, Second Vice-President; Mr. Fred B. Taylor, Treasurer; Miss Annie F. Brown, Secretary. The Executive Committee consists of Mr. Fred Kahn, Dr. A. S. Kelly, Rev. Chas. L. Kloss, Mrs. F. C. Turner and Dr. Edward von Adelung.

LOS ANGELES COUNTY.

Los Angeles County Medical Association.

Meeting Feb. 7, 1918, with the president, Dr. Wm. Duffield, in the chair.

The following resolution was adopted:

Resolution—In re Contract Practice in Industrial Compensation Work.

(Note—The following resolution was presented by the Special Committee sending out the questionnaire post-card, and has been adopted by the Board of Councilors, subject to ratification by the Society at one of its meetings.)

Whereas, At the Santa Barbara meeting of the Medical Society of the State of California, at which was adopted the minimum fee table for industrial accident work, it was agreed that this work should be carried on between every public or private insurance company, and an attending surgeon, upon the basis of an individual bill, rendered as per the above referred to minimum fee table; and that no contract agreements, either direct or indirect, whereby this agreement would be violated, in that a lesser fee would be accepted, would be allowed by either the State Medical Society or any of the public (state) or private insurance companies; and

Whereas, The recent referendum vote of the Los Angeles County Medical Association, as published in the November 15, 1917, Bulletin of the Society, clearly showed by a very large majority, that the members were in full accord with the Santa Barbara State Society agreement; now therefore be it

Resolved, By the Board of Councilors of the Los Angeles County Medical Association (the Association in general meeting ratifying the same on.....), that any violation of the Santa Barbara State Society agreement, as outlined above, shall automatically subject the member who does so to such disciplinary measures as in the judgment of the Ethics Committee and Board of Councilors seems proper (as per the disciplinary code printed in the State Journal of January, 1918, page 53).

Dr. W. H. Browning spoke on Thrift Stamps.

"A Symposium on Brain Injuries" was introduced by Dr. Eliot Alden with "Surgery of Brain Injuries":—

"In head injuries surgery can accomplish only three things:

"1. Prevention of infection in compound fractures.

"2. Remove local irritation from spicules of bone or foreign body.

"3. Relieve intracranial pressure.

"The first two need no special discussion. The third is equally important and more often overlooked.

"Intracranial pressure first stimulates then paralyzes cerebrum first, medulla last. The blood pressure rises to overcome the intracranial pressure and relieve cerebral anemia and is conservative. Passive congestion of the optic disk occurs early and is probably purely mechanical. With congested disk and rising blood pressure, operate with a view of relieving intracranial pressure before the paralytic stage sets in. The process is mechanical. The cerebral pressure is increased which interferes with the return flow of blood from the eye causing the passive congestion of the disk. The blood pressure rises to force blood against the increased pressure. A decompression relieves the pressure and accompanying symptom."

Dr. A. L. MacLeish discussed the ocular findings in fracture of the skull.

He pointed out that in many cases the clinical signs of localized hemorrhage may be absent, and that valuable time is wasted in waiting for their development. In the case of basal fracture blood may be effused into the orbit, or certain of the ocular nerves, particularly the third or sixth, paralyzed by the pressure of effused blood. Early in the case we may find marked dilatation of the retinal veins, with a beginning consecutive oedema of the retina, which more or less blurs the fundus-detail. This is purely a circulatory disturbance, due to interference with the outflow from the retinal veins.

With the passing of the primary shock, some six hours after the injury, the pulse falls, the blood pressure rises, and fresh extravasation takes place, or fresh and unduly increased secretion of cerebrospinal fluid; and now appears a sign more ominous,

in that it indicates a rise in the intracranial pressure: the optic disk begins to show a superadded edema of its own. Its nasal margin becomes blurred, later also its temporal margin, and soon the whole disk-surface becomes obscured, and its detail lost. Later this develops into a definite measurable papilloedema, or "choked disk," the rate of development of which depends on the rate at which the intracranial pressure rises. During the stage of recovery from shock repeated ophthalmoscopic examinations must be made, so as to observe the earliest appearance of rise of intracranial pressure. This is not to be done in a casual manner, but carefully and deliberately, using always, because it can be done with a minimum of disturbance of the patient, and with the greatest ease to the examiner, the electric ophthalmoscope. Difficulties arise which must not be allowed to act as hindrances, because the accurate observation of the condition of the eyegrounds is all important as a guide to treatment. Should the condition of the pupils be a bar to accurate observaton, they must be dilated, using euphthalmine instead of one of the stronger mydriatics, so that the dilatation may be only transient, and the pupillary signs be only temporarily abolished. Jactitation may be a serious hindrance; if not controlled by morphine, a few whiffs of chloroform (not ether in such a case) will overcome it sufficiently to enable an observation of the eyeground to be made.

Simultaneously with the appearance of the ocular signs of increased intracranial tension there will be found also a rise in the pressure of the cerebrospinal fluid, as determined with the mercurial manometer at lumbar puncture. Puncture should at once be made on discovery of the ocular signs, but cautiously, and with the withdrawal of only a small amount of fluid, especially when the pressure is much raised, the danger being that, with too great relief below, the medulla and pons may be driven into the foramen magnum and choked.

During the whole stage of recovery from shock the pulse and respirations should be carefully watched. As the pulse descends from 120 to 100—90—80—70—60, repeated ophthalmoscopic examinations should be made. If these show increase in the signs of intracranial pressure, the clear inference is that the lowered pulse-rate is due to medullary compression, and the danger-signal of impending medullary oedema is already hung out. Now is the time for operative interference by way of subtemporal decompression. Earlier, in the stage of shock, the added shock of operation is unwarranted; later, when the rapid rise of the pulse indicates the onset of medullary oedema, operation is admittedly too late. I would earnestly insist that when, with a falling pulse, we find the earlier indications of increased intracranial pressure—blurring of the disk and its margin—and lumbar puncture gives an actual measurement of the amount of increase, decompression should be promptly done. To wait until "choked disk" appears, is not only to lose the most favorable time for a successful operation, but to run the risk of post-traumatic conditions of depression and instability, the sure resultants of prolonged unrelieved intracranial pressure. Operation with these as the end results is no triumph; it is a veritable disaster.

(Continued next month.)

—

Doctors of Los Angeles County.

The associate editor of the California State Journal of Medicine, representing the Los Angeles County Medical Association, herewith respectfully requests your kind cooperation by sending him all news of medical men and events of interest to the profession in our section of California. Especially does he wish to get every first day of the month a short report from the secretaries of the different branches and sections of our society. The reports should be typewritten and double spaced. As necrologist for the society he should also receive notice of the death of any member, giving history, picture, and names and addresses of three or four best professional friends in good standing who would write fifty-word eulogies of the deceased for the Bulletin and the bereaved family. The news for the California State Journal of Medicine will be appreciated by all the members who read the same and will relieve the L. A. editor of a great deal of work and worry for which he receives no remuneration. Address Dr. Wm. Wenzlick, 628 Auditorium Building, Los Angeles, Cal.

—

Eye and Ear Section.

The January meeting of the Eye and Ear Section of the Los Angeles County Medical Association was held at the offices of Dr. A. L. Kelsey.

Dr. J. H. McKellar reported a case of cataract in a girl of eight years following chicken pox. The second case was a burn of the eye.

Dr. Ross Harris reported and showed a case of albinism in an Armenian. Vision is only 10/70 in each eye. The second case was one of vernal conjunctivitis persisting through the year.

Dr. George Lund reported a case of carcinoma of the nasopharynx in a woman of sixty, which was removed by means of a large adenotome. Post-operative packing was held in place by silk sutures fastened to the cheeks with adhesive plaster.

—

The regular monthly meeting of Pasadena Branch, Los Angeles County Medical Society, was held at the Pasadena Hospital, Tuesday evening, February 12, 1918.

Subjects: Observations on Anesthetics, by J. M. Wilson, M. D.; discussion by Mary Hagedorn, M. D.; Surgery of Gall Bladder, by H. H. Sherk, M. D.

—

The Santa Monica Bay Branch held no meeting in February. Six of our members have joined the colors, which makes quite a hole in our ranks (we have only fourteen or fifteen members), and the rest of us are unusually busy; so the outlook for good medical meetings is bad. But I will report what we do.

—

Dr. Henry B. Stehman, age 66 years, died in Pasadena, Feb. 17, 1918. He received his degree in Jefferson Medical College, Penn., 1877. He was the founder of the Lavinia Sanatorium at Altadena, and is survived by the widow, a son and two daughters.

Dr. Edward Arbo Trommald died Feb. 17, at the age of 53, in Long Beach, from an attack of appendicitis. He practiced his specialty of eye and ear in Long Beach. He graduated from the Cooper Medical School, San Francisco, in 1894, and is survived by his widow and a brother practicing in Portland, Oregon.

Dr. James W. Shaul died shortly after cranking his automobile Feb. 21, at the age of 45, in his home, 1342 Elza Avenue. He was a graduate of the Buffalo Medical School and was on the teaching staff of the Postgraduate Medical School of Los Angeles. He leaves a widow and a married daughter.

Dr. J. Allen Osmum, age 64 years, died at Whittier of heart trouble, Feb. 25. He was a banker, capitalist, and citrus project promotor, and a close friend of Thomas A. Edison. He leaves a widow and four sons.

Dr. Oliver W. Butler of Los Angeles was ordered for active duty on Feb. 7, to go to North Island, San Diego, and from there to France.

Dr. Ralph W. Smith of Los Angeles, and Mariana de la Torre, a native of Spain, are going to be married; a license was secured Feb. 9.

Dr. Karl L. Dieterle is back at the Receiving Hospital as assistant surgeon, Feb. 10. He is in the Medical Reserve Corps of the Army.

Physician and Guests in Auto Accident.

Dr. Philip B. Riggins, head of the Santa Fe Hospital, accompanied by guests, was struck by a Pacific Electric San Pedro car on Slauson Ave., near Long Beach, sustaining a possible fracture of the skull, concussion of the brain, the knee cap, and cuts about face and arms.

Runaway Auto Hurls Doctor Into Window.

Dr. John A. Saffa was seriously injured, Feb. 12, when an automobile bounded over the curb on South Broadway and struck him. Hurled through a plate glass window, he suffered two broken legs and a possible fracture of the skull.

Dr. C. W. Rand (Feb. 12) received orders from the Surgeon-General to report at the Neurological Institute, New York City, Feb. 18, for a course of intensive training in head surgery. He is a member of Base Hospital No. 35, which unit he is to rejoin later.

Dr. W. Harold Wickett was commissioned as captain in the Medical Corps, Feb. 12. He had just returned from a two-months' trip East and expected to leave for France within a fortnight.

Dr. Robert B. Hill, pathologist and bacteriologist of Los Angeles, has left (Feb. 13) for San Francisco, where he will enter the Letterman General Hospital at the Presidio.

New Hospital for Los Angeles Homeopaths.

Under the auspices of the Homeopathic Society at a monthly meeting in the Hotel Alexandria, this possibility was considered. In order to accommodate the ever increasing number of patients who would rather be treated in hospitals than at home, Dr. Myron W. Adams, of Rochester, N. Y., suggested to establish homeopathic hospitals. Dr. F. S. Barnard announced that plans to that effect would be worked out by the society. He also stated that the mortality among the wounded in the present war was far below that of any previous one, due to modern methods of surgery. Dr. Charles S. Salisbury spoke of the work accomplished by the Maternity Cottage and Homeopathic Hospital on Mateo Street. The next meeting will be held March 12, when Dr. T. C. Low will read a paper on "Effect of Shell Shock on the Nervous System." Dr. George H. Martin presided.

Los Angeles Red Star Leads U. S. in Contributions.

The local chapter of the American Red Star Animal Relief Society is the largest in the United States, having raised during 1918 $10,007.14. Chattanooga, Tenn., is second with $5,033.75, and New York third with a little over $2000, for carrying on the humane work among dogs and horses as per headquarters at Albany, N. Y., Feb. 14. Mrs. Claire Hosler Coombs, in charge of the L. A.

Barlow Sanatorium Requests Contributions.

The Barlow Sanatorium Association announced Feb. 14 that it needs funds to carry on the work of caring for incipient cases of tuberculosis who under supervised treatment are able to resume their industrial activities. The cost of each patient averages $10 a week, but $5 a week is the charge made to patients, the remainder of the sum being raised through voluntary subscriptions. Forty dollars will care for a patient for eight weeks, the period for revigoration. The emergency fund is not considered as charity money. Reconstruction or prevention are factors in this social service work and sickness should be checked rather than the sick shall become a burden to the community. Contributions may be made in care of the Social Service Commission, Normal Hill Centre.

Red Cross.

The home nursing and first aid department of the Los Angeles Red Cross Chapter is fast becoming one of the most significant parts of the mercy organization's war work. It has prepared several score women for service as nurse's aides. Several hundred women have completed the course of home nursing and are now (Feb. 14) ready to serve in emergency cases. New classes are being organized when necessary, and every one is urged to take the courses.

Over 300 auxiliaries and branches have been formed here, with more than 25,000 active workers.

Woman Appointed Food Director for Los Angeles Zone.

Mrs. Elizabeth Mumford of South Pasadena is made head of Los Angeles County. She is closely identified with Red Cross work and women's club affairs in Los Angeles. Mrs. J. T. Anderson also was appointed in a like capacity for the city of Los Angeles. Thirty-nine other women as food directors are to co-operate with the various county food administrators throughout the state, and in eight of the larger cities, and were announced in San Francisco by Mrs. Robert J. Burdette, chairman of the board of women's work in food conservation for the State Food Administration.

Southland Doctors Slow to Register.

H. J. Castellaw, in charge of the Los Angeles office of the State Board of Medical Examiners, says that many physicians of Southern California have failed to comply with the law providing for registration of all licensed practitioners in California. Only about one-half have registered their names, address, and license numbers, or have paid their fee of $2. The law was framed to defray expenses of compiling and publishing a directory of all licensed physicians in the state, and providing each registrant with a copy, for the purpose of checking misrepresentations of unlicensed practitioners. Registration is required each year on or before Jan. 1. Sixty days of grace have been provided for physicians not acquainted with the requirements. Notices have been sent to physicians through various medical associations, but many claim not to have received any. The fee of $2 should be paid to Charles B. Pinkham, M. D., Secretary-Treasurer of the Medical Board of Examiners, in Sacramento.

Medical Standard to be Raised.

At a meeting of the State Board of Medical Examiners for 1918 at Fraternal Brotherhood Hall Feb. 21, assurance was given that medical imposters would be suppressed and the standard of medical practice advanced. Those of the board present were: Drs. Harry E. Alderson, San Francisco; H. V. Brown, Los Angeles; Robert A. Campbell, William R. Molony, Los Angeles; Percy T. Phillips, Santa Cruz; Charles B. Pinkham, San Francisco; Ernest Sisson, Oakland; D. L. Tasker, Los Angeles; A. M. Smith, Oakland. H. J. Castellaw, special agent for the board, announced the revocation of licenses held by William S. Card, San Francisco; T. F. Glass, Los Angeles; George Ball Rowell, San Bernardino.

Nurses' Home on Hospital Grounds.

The Ebell Club, Friday Morning Club, the Cosmos and other club organizations, with the co-operation of the Social Service Commission, have adopted resolutions condemning the proposed plan of the supervisors to purchase and adapt the old osteopathic college for a nurses' home. Letters have been sent to individual supervisors urging them to erect a modern, fully equipped home, inside the hospital grounds, and not to waste the county's money to purchase and alter a totally inadequate building away from the hospital property. Superintendent Norman Martin of the County Hospital asked the supervisors for $200,000 for a new home and admitted that 160 nurses, 82 of whom are pupil nurses, are improperly housed, that the

home has only 48 rooms and 93 nurse occupants. Outside of the crowded home 45 nurses sleep in the psychopathic dormitory, 5 in the observation cottage, 22 in the library dormitory, 2 in the library room, 5 in the Sichel street cottage, 10 in the contagion pavilion and 2 outside the hospital. The taxpayers could be saved $5000 a year by having a nurses' home that will attract pupil nurses and thus save the very much higher rates of so many more graduate nurses.

—

Los Angeles County Hospital News.

A new service building at County Hospital is rapidly nearing completion. This building consists of five stories and will be used for kitchen, dining rooms, and storerooms. New kitchen equipment will be used of most modern kind. It also will give us room for making more wards in the hospital, which are greatly needed because our patients are rapidly increasing. We must have more ward space.

Several members of Los Angeles Army Base Hospital No. 35 are getting notices to report for duty at various camps. Eight nurses of same unit also have left for service in various camps.

—

Hospital Unit Chief in Los Angeles.

Dr. J. A. Danna, director of United States Base Hospital No. 102, arrived Feb. 21. He is chief surgeon of the Charity Hospital in New Orleans and occupies the chair of surgery at the Loyola Post Graduate School of Medicine in New Orleans. He is organizing an army hospital unit authorized by the Secretary of War for service in Italy. The organization, which has been endowed by Mrs. John Dibert of New Orleans, who subscribed $100,000, will be regularly enrolled Red Cross unit and known as the Loyola University unit. The unit will consist of a total of 251 officers, nurses, civilian employees and enlisted persons. Of 64 nurses, 10 will be Sisters of Charity. Dr. T. Chalmers Myers escorted Dr. Danna as guest to the Sisters' Hospital, where those qualified to become members may obtain information.

—

Civil War Surgeon at Grandchild's Wedding.

Dr. J. C. Schoonover, 94 years old, celebrated at his home, 220 No. 4 Street, Sawtelle, the wedding of his granddaughter, Mrs. Hattie F. Prall, and Allen E. Harden, both of Goldendale, Wash.

—

To Aid French Children.

Dr. R. C. Whitlock, who had charge of various departments of charitable medical work for children, will leave for France, to do special work in the recently organized Child Welfare Department in France. He volunteered last year and has been waiting orders.

—

Doctors Asked to Join Medical Corps.

Registrar David B. Lyons, secretary of the County Council of Defense, appeals for volunteers in a volunteer medical service corps to do home communities medical, surgical and sanitary work that the Medical Officers' Reserve Corps does for the Army. The demands incident to examination of drafted soldiers, including the reclamations of men rejected because of comparatively slight physical defects; the need of conserving the health of families and dependents of enlisted men and the preservation of sanitary conditions, must be met in spite of the great and unusual depletion of medical talent due to demands of field and hospital service.

Physicians wishing to join the corps should write to the secretary of the central governing board of the general medical board of the Council of National Defense for applications. An appropriate badge is to be adopted as official insignia.

The Aviation Section of the Signal Corps has an examining unit composed of about fifteen leading specialists, otologists, ophthalmologists, internists, etc., in each of forty large cities in the United States. The Los Angeles examining unit is established in the Post-Graduate Department of the University of California (Los Angeles Branch), No. 737 North Broadway. It is in charge of Capt. A. N. Bobbitt, M. R. C., and Lieut. C. G. Stivers, M. R. C. Since its opening in October, 1917, there have been over eight hundred candidates for Aviation examined. Over one hundred operations for correction of deviated septum, diseased tonsils, adenoids, etc., have been performed by the examining physicians free.

—

Winnipeg Red Cross Wants Hospital in California.

March 6—Frederick M. Ryder, American Consul-General at Winnipeg, Manitoba, Can., has written to Secretary of State Jordan that the Canadian Red Cross is desirous of establishing a convalescent home in California for wounded soldiers. The State Board of Health will request the California Red Cross to act at once, as 25 men are ready to come, and 100 during the winter. The cost will be borne by the Red Cross, except salaries of the medical officer and nurses.

—

March 7—Captain Thomas J. Orbison of Pasadena was ordered to report at the Letterman General Hospital, Presidio, San Francisco, for special work in neurology.

MARIN COUNTY.

On February 21st the Marin County Society met and elected officers for 1918: Dr. H. A. Howitt, president; Dr. W. F. Jones, secretary and treasurer and associate editor. Dr. J. H. Kuser was elected delegate to the State Society, with Dr. L. L. Stanley and Dr. A. H. Mays alternates. Three of our members have been called to the colors, Drs. W. J. Stone, L. H. Anthony and R. J. Dufficy, and another member, Dr. O. P. Stowe, is on the waiting list, having received his commission.

MENDOCINO COUNTY.

A regular meeting of the Society was held at Hotel Willits, Willits, on Saturday evening, February 9th.

The president, Dr. G. W. Stout, called the meeting to order. Present: Drs. G. W. Stout, H. O. Cleland, F. G. Gunn, F. S. Baxter and O. H. Beckman.

Minutes of previous meeting read and approved. A letter from the Senior Medical Examiner, U. S. Naval Hospital, Mare Island, California. A letter descriptive of camp life at Camp Lewis, Washington, from Lieut. Raymond A. Babcock. Other letters.

Dr. F. G. Gunn started the scientific program by describing "Recent public health work in Willits." The Doctor dwelt especially on the difficulty of keeping track of the contagion carriers, particularly so of those who—although not themselves sick—harbor the diphtheria bacillus, making it very difficult to stamp out that disease. He reported 19 cases of diphtheria, five of typhoid fever, innumerable of parotitis, with some cases of scarlatina and measles. The discussion was general and interesting.

Next Dr. Frank S. Baxter read comprehensive and very enlightening research notes on "Legislative Control of Venereal Diseases." This subject was generally discussed and many interesting and instructive points brought out.

Dr. H. O. Cleland described and discussed the Caesarean section he was to perform the following morning at the Laugland Hospital, Ukiah.

Dr. Lew Knapp Van Allen, Ukiah, was elected to membership.

A lunch followed the adjournment. The Willits

fraternity were the hosts and while discussing the palatable eatables the utmost goodfellowship prevailed.

On Sunday morning at the Laugland Hospital, Ukiah, Dr. H. O. Cleland, assisted by Drs. S. L. Rea and F. S. Baxter, with Dr. L. K. Van Allen as anesthetist, performed Caesarean section on a patient who had congenital dislocation of both hip joints and whose pelvic measurements absolutely contra-indicated any other method of delivery. The child—a boy of 7½ pounds—was delivered in 90 seconds. The whole operation was completed—both fallopian tubes resected and all suturing finished, to the last horsehair one of the skin—in 27 minutes.

The mother reacted well to postoperative treatment and at this writing is doing well, nurses her baby and has an abundance of milk.

News From Our Medical Volunteers.

Lieut. H. H. Wolfe expects to stay at Allentown, Pa., for some time to come.

Lieut. Raymond A. Babcock has been ordered to the Presbyterian Hospital, Chicago, according to the A. M. A. Journal.

Asst. Surgeon R. H. Hunt, U. S. N. R. F., has been transferred to the New York Navy Yard, New York, N. Y., where he is doing duty on the Receiving Ship. "That is the name they give three buildings and two big Hudson River boats. Every man who is ordered to the Yards or to New York has to come through the Receiving Ship, it makes a great deal of work and it is very interesting. Quite often we have whole crews of ships that have been in action over on the other side. Just yesterday we reenlisted quite a number from the destroyer "Jacob Jones" that was lost a little while ago. I think that it shows that many of the men have the proper stuff in them when they want to reenlist after they have had the strenuous time that those boys have had."

ORANGE COUNTY.

At the meeting of the Orange County Society on February 28th, the following officers were elected: President, Dr. W. W. Gatliff; vice-president, Dr. D. L. Martin; secretary-treasurer, Dr. F. M. Lawson; associate editor, Dr. W. H. Walker. Meetings will be held bi-monthly.

SAN FRANCISCO COUNTY.

Health Department Request.

The Health Department is desirous of impressing the members of the Medical profession in San Francisco with the importance of reporting venereal diseases coming under their observation and care. The State and municipal authorities are making every effort to comply with the requirements of the Federal Government in preventing the spread of venereal diseases, and we would therefore ask if it would not be possible to give some little space in your valuable journal to this subject and urge upon the members of the profession the absolute necessity of reporting all such cases.

Attention is called to the necessity for saving the glass tubes furnished by the Health Department in the taking of diphtheria cultures. There must be a great many of these glass tubes scattered about the city as we can account for loss from breakage in our laboratory, but cannot trace many of these outfits that go out and are never returned. The price of these tubes has advanced in a very marked degree and in the interests of economy and conservation we would request that you call the attention of the profession to the necessity of returning to the Health Office all unused, old or unsatisfactory tubes now in their possession.

County Society Meetings.

During the month of February, 1918, the following meetings were held:

Tuesday, February 5th, Section on Medicine.

1. X-rays in the treatment of menorrhagia. L. H. Hoffman.
2. A case of abnormal thyroid disease; demonstration of patient. H. D'Arcy Power.
3. The cerebrospinal fluid in health and in disease. O. G. Freyermuth.

Tuesday, February 12th, General Meeting.

(Held in the new quarters of the Society, Medical Building, Bush and Hyde Streets.)

1. Address. John H. Graves.
2. The value of Roentgen rays and benzol in the treatment of polycythaemia. Presentation of case. S. H. Hurwitz.
3. Demonstration of material from two autopsies:
   A. Carcinoma of pylorus and of uterus; multiple arthritis.
   B. Endothelioma of brain. E. V. Knapp.

(Refreshments were served at the close of the meeting.)

Tuesday, February 19th, Section on Surgery.

1. Syphilis of bones. E. J. Casper.
2. Treatment of wounds with Carrel-Dakin and allied solutions. C. L. Hoag.
3. Selected surgical cases from service of Letterman General Hospital.
   A. Mobile spleen simulating pelvic tumor. Diagnosed by exploration and followed by splenectomy. Consequent effects and consideration of unusual nerve findings. Presentation of specimen.
   B. Liver abscess. Report of cases. Surgical technique. Unusual sequelae.
   C. Thyroidectomy. Post-operative results. Consideration of selected cases. Consideration for surgical interference in Army work.
   D. Syringomyelic signs shown in a case of cervical fracture. Treatment of the same. Case contrasted with signs and symptoms of a dorsal fracture and also with bayonet wound of skull. Major W. C. Chidester, M. O. R. C., Letterman General Hospital.

February 26th, Section on Eye, Ear, Nose and Throat.

1. Demonstration of cases. Hans Barkan and H. B. Graham.
2. New ideas from recent visit to Eastern clinics. H. B. Graham.
3. War, with reference to eye, ear, nose and throat service. J. J. Smith.

SAN JOAQUIN COUNTY.

The February meeting of the San Joaquin County Medical Society was held at the Chamber of Commerce Friday evening, February 15th. It was a joint meeting of the medical society and the San Joaquin Dental Association. The members of the society present were Drs. Margaret Smyth, C. R. Harry, R. T. McGurk, J. T. Davison, J. E. Nelson, Mary Taylor, S. W. R. Langdon, Fred Clark, D R. Powell, with Dr. McClish of Stockton, Dr. Reamer of Modesto and Dr. Cross and Dr. Duff of Fresno as guests.

The paper of the evening was presented by Dr. Cross on "Tumors of the Mouth," illustrated by many interesting and instructive lantern slides. The paper represented a considerable amount of work done by himself and Dr. Bloodgood at Johns Hopkins University, and was greatly appreciated by the members of the medical and dental profession in attendance. Following the paper there was a general discussion from the floor, whereupon the meeting adjourned.

Military News

A Navy Base Hospital, made up principally of physicians, nurses and enlisted personnel enrolled in the Naval Reserve Force from Stanford University Medical School, San Francisco, has reached the war zone, Secretary Daniels announced recently. This hospital has a capacity of five hundred beds, and will take care of many persons both ashore and afloat, and also will be available for army and allied sick and wounded.

TUBERCULOSIS NEEDS.

At least 50,000 more tuberculosis hospital beds will be needed in the United States within the next two years to make possible the adequate control of the disease and check its tendency to increase its ravages under war conditions as it has in Europe during the last three years. This is the latest estimate of the National Association for the Study and Prevention of Tuberculosis. There are 43,000 beds available in the country at present.

This estimate is based on a revised conception of the prevalence of the disease as the result largely of the examination of recruits and drafted men for our new army and navy. Until recently it was estimated that for every death from tuberculosis in the country there were five active cases of the disease. It is now believed that the true ratio is twice or three times as great. Instead of about 1,000,000 active cases in the country there are probably between two and three million.

State Board of Health

MARCH MEETING.

The State Board of Health met in Sacramento on March 2, 1918. The following members were present: Dr. George E. Ebright, president; Dr. F. F. Gundrum, vice-president; Dr. Edward F. Glaser, Dr. Adelaide Brown, Dr. Robert A. Peers, and Dr. W. H. Kellogg, secretary.

Professor W. B. Herms, Consulting Parasitologist in the Bureau of Communicable Diseases, was given leave of absence for the period of the war, beginning February 15, 1918. Mr. Stanley B. Freeborn was appointed as acting Consulting Parasitologist during Professor Herms' absence.

Dr. J. R. Snyder, bacteriologist in charge of the Northern Branch Laboratory, was also given a leave of absence during the period of the war.

Dr. John N. Force, Assistant Professor of Hygiene in the University of California, was appointed Consulting Epidemiologist in the Bureau of Communicable Diseases.

Upon the recommendation of Dr. H. G. Irvine, Director of the Bureau of Venereal Diseases, certain amendments to the Board's rules and regulations for the prevention of syphilis and gonococcus infections were adopted.

Upon the recommendation of the Director of the Bureau of Registration of Nurses, certificates were granted to two registered nurses through reciprocity. In accordance with the further recommendation of the Director of the Bureau of Registration of Nurses the nurses' training schools in connection with the following hospitals were placed on the accredited list for one year: Alameda County Hospital, San Leandro; Emergency and General Hospital, Los Angeles; French Hospital and the German Hospital, San Francisco; Redlands Hospital, Redlands; and the White Hospital, Sacramento.

Upon the recommendation of the Director of the Bureau of Sanitary Engineering, final permit for supplying water under certain conditions to the citizens of Watsonville was granted to the Watsonville Water Company. A similar permit was granted to the City of San Bernardino for supplying water to the citizens of San Bernardino, from Lytle Creek. Upon the further recommendation of the Director of the Bureau of Sanitary Engineering temporary permits to operate swimming pools were granted to the City of San Jose, Commission of Public Parks and Buildings, Pasadena; Sequoia Resort Baths, Napa; and the Hotel Vendome Company, San Jose. Permit to construct sewers and interceptor at Hammonton was granted to the Hammon Engineering Company of San Francisco.

The license of the Mason Ice and Cold Storage Company of Lodi was transferred to the Union Ice Company of San Francisco. The name of the Lodi plant in the future will be the Lodi Ice and Cold Storage Company. Upon the recommendation of the Director of the Bureau of Foods and Drugs a license to operate a cold storage warehouse was granted to the Home Ice and Cold Storage Company of Long Beach. The report of the Food and Drug Inspection Committee was approved, following which a number of alleged violations of the Food and Drug laws came before the Board for hearing.

New Members

Harrison, C. W., Loma Linda.
McGill, Wm. B., Lancaster.
Donaldson, Arthur N., Loma Linda.
Rodgers, Spencer C., Watsonville.
Castle, C. H., Gustine.
Musgrave, W. E., San Francisco.
Haviland, Clarence M., San Diego.
Hutchison, C. W., Coalinga.
Betts, H., Visalia.
Sevenman, Geo. H., San Mateo.
Campbell, Geo. F., Atascadero.
Arnold, Mott H., San Diego.
De Puy, E. S. Spence, Oakland.
Hicks, J. R., Delano.
Vowinckel, F., San Francisco.
Michelsen, Lewis, San Francisco.
Smith, Elmer W., San Francisco.

Resigned

Coleman, B., Mokelumne Hill.
Lorentz, Robert, San Francisco.
Tyler, Leatha R., San Francisco.

Transferred

Moseley, Gayle G., from San Bernardino County to San Francisco County.

Deaths

Shaul, Jas. W., of Los Angeles; Univ. of Buffalo, '96; Univ. State New York, '96; aged 45; died February 22, 1918, from exertion of cranking his machine.

Metcalf, Olive B., of Oakland, Cal.; Calif. Med. Coll., '83; died in Oakland, Feb. 18, 1918.

Dawson, William J. G., of Eldridge, Cal.; Med. Dept. Univ. of City of New York; died at his home, March 4, 1918.

Trommald, E. A., of Los Angeles, Cal.; Cooper Med. Coll., Calif., '96; died at his home Feb. 7, 1918.

Powell, David, Marysville, Cal.; Med. Dept. Univ. of Pacific, '71; Cooper Med. Coll., Calif., '82; died in Marysville, Feb. 28, 1918.

Stehman, Henry B., Pasadena, Cal.; Jefferson Med. Coll., Pa., '77; died Feb. 17, 1918.

Whedon, Daniel Dennison, San Diego; Long Island Coll. Hosp., '05; has deceased, aged 39.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

Publication Committee:
E. C. FLEISCHNER, M. D. A. B. GROSSE, M. D. SOL HYMAN, M. D. GEORGE H. EVANS, M. D.

Advertising Committee:
R. E. BERING, M. D. THOS. E. SHUMATE, M. D.

Representative of the Council, E. N. EWER, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn.....Dr. W. H. Walker, Willows
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin.....Dr. W. F. Jones, San Rafael
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa.....Dr. Robt. Crees, Napa
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. P. H. Reilly, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI MAY, 1918 Number 5

THE DEL MONTE MEETING.

Reports of the annual meeting of the California State Medical Society will appear in the June issue of the JOURNAL. Suffice it to say that the meeting was one of the best from every standpoint that has yet been held. Many matters of vital importance came up for decision and the results will be far-reaching. Weather, location, and the spirit of the times combined to lend special distinction to its deliberations. The advantages of holding the sessions away from a large city and its distractions was again demonstrated. A splendid group of men were elected to the offices of the Society and their character promises a continuance of the excellent régime preceding them. The new officers are as follows:

C. Van Zwalenburg, Riverside, President; John H. Graves, San Francisco, First Vice-President; Ferdinand Stabel, Redding, Second Vice-President; Saxton Temple Pope, San Francisco, Secretary; Councilors—C. G. Kenyon, San Francisco, Chairman (6th District. Term expires 1919); T. C. Edwards, Salinas (3d District. Term expires 1921); E. N. Ewer, Oakland (7th District. Term expires 1920); A. W. Hoisholt, Napa (9th District. Term expires 1920); P. T. Phillips, Santa Cruz (5th District. Term expires 1920); E. C. Moore, Los Angeles (2d District. Term expires 1919); George H. Aiken, Fresno (4th District. Term expires 1921); Jas. H. Parkinson, Sacramento (8th District. Term expires 1919); René Bine, San Francisco (At Large. Term expires 1920); O. D. Hamlin, Oakland (At Large. Term expires 1919); H. A. L. Ryfkogel, San Francisco (At Large. Term expires 1921); Geo. H. Kress, Los Angeles (At Large. Term expires 1920); J. C. Yates, San Diego (At Large. Term expires 1920); G. G. Moseley, Redlands (At Large. Term expires 1920); J. C. King, Banning (1st District. Term expires 1921).

CONTINUING NEED FOR SURGEONS IN MEDICAL RESERVE CORPS OF ARMY.

California with a medical population of 5687 has given 783 to the Army. This is 13.8 per cent., whereas our real quota should have been nearer 20 per cent. Not only is this number, then, somewhat below what it should have been, but it leaves the state rather low in the list of states in regard to this matter. California and Connecticut have each 13.8 per cent. of its medical population in the Army, and so are contestants for the twenty-ninth position. Nevada still ranks first with 154 medical men in the state and 37 in the Army, which is 24 per cent. of its medical population. Arizona is second, Montana third, and Pennsylvania fourth in the list of percentages.

The need of physicians for the M. O. R. C. is still urgent. The Surgeon-General's report for March 22d shows a total of 18,138 officers in the corps, 14,911 of whom are now on active duty. It is found on referring to previous reports that at the present time officers are being called to duty in greater number than they are being admitted to the corps, therefore, it is obvious that the corps will soon be depleted.

There will be added to the Army this year about three-quarters of a million men. These will require about 7500 surgeons. The Council of National Defense at the present time is asking California for at least 200 more surgeons, but looking this matter squarely in the face it would seem as if 300 or even 500 would be more appropriate. The California State Committee of the Council of National Defense has made a study of the doctors

available in the state, and has asked, and intends again to ask, the medical men in each county and in each city to have a meeting, canvass their own medical population, and decide which of those who have not yet gone should go first and which next, so that the burden—if it is a burden—may be made as light as possible and the service, which is paramount at the present time, may be rendered to the best advantage.

Who is not interested? Who cannot put a service flag with one or more stars in the window of his house or wear a service button showing that one or more members of his family has gone to fight for that freedom which we call Democracy? The importance of having the best medical and surgical ability of the country in the Army comes home to each one. The younger man—the man who is of the proper age—must remember that this great opportunity is his, and that the time to know it and take it is now. If he has not already made up his mind, or gone a step farther and made his arrangements, he should no longer delay taking both these steps, for it is far from likely that the foe is going to be beaten to an understanding of his defeat for some time to come, and the call for surgical assistance will not quiet until every German himself knows that Germany has lost.

REPORT OF PROVOST MARSHAL GENERAL ON FIRST DRAFT.

Under date of December 20, 1917, the Provost Marshal General has issued a report of the results of the first draft for the Army under the Selective Service Law. The report is compendious and will afford material for much interesting study. On June 5, 1917, there were enrolled a total of 9,586,508 men, of whom 3,082,949 were examined. Of this latter figure 1,057,363 were certified for military service. Of those so certified, 252,294 failed to appear when called for examination and according to the law were accordingly certified for service. This leaves, excluding also certain other minor classes, a total of 2,510,706 men who were actually examined by local boards. Of these, 730,756, or 29.11 per cent. were rejected for physical incapacity. Of these, 22,989, or 5.8 per cent., were rejected after being sent to cantonments by the local examining boards. Of the California men, 26.17 per cent. were disqualified for physical reasons.

Practically one-half of those called claimed exemption on some ground and of these 39 per cent. were exempted, constituting 77.86 per cent. of the total claims made for exemption. Less than 6000 arrests were made for failure to register.

The total expense of the draft was $5,211,965.38. The average cost per registrant was $0.54, per man called was $1.69, and per man accepted for service was $4.93.

Certain lessons and guides for the future are drawn from the results of the first draft which are worthy of consideration. It directs attention to the strategic necessity of the three vital industrial fields of shipbuilding and manning, munitions manufacture, and agriculture. The order of mention of these three is significant of their relative importance for the war. Emphasis is placed on the reasons leading to a complete revision of the draft regulations and the classification of all men in the draft age according to certain rules. The first draft showed itself a powerful force in controlling and distributing labor throughout the country. Later it may be necessary for the Government to draft labor directly, a proceeding well within its powers and rights. But before such a necessity, it would seem that the principles of the revised draft should be tested thoroughly as they give promise of functioning to this desired end. "The entire industrial field must be explored, provision of facile and effective methods must be perfected, and the selective service system must stand as a pervasive and supple control which shall serve its purpose, so far as its powers make possible, in co-ordinating the man power of the nation and so fostering its industries in a nice and impartial balance which shall carry forward all varied endeavors, not singly or irregularly, but compacted in an even and synchronized march."

Many features of the data from the first draft are not yet available. Some of these we would especially like to see. It is much to be hoped that comprehensive data from the physical examinations will be available which will throw light, for instance, on the amount of previously undiscovered illness and disability. The lessons to be learned in the control of individual diseases are important. Especially is this true in the case of syphilis and gonorrhea. The control of tuberculosis, as a national problem, will be fostered by the data here elicited. The valuable results of physical examinations of a fairly uniform character on a large number of representative young Americans drawn from all parts of the country, should be carefully collated and preserved.

THE DECLINING CIVILIZED BIRTH RATE.

It is an undisputed fact that the birth rate falls as civilization advances. Birth control and civilization go hand in hand. It is also an undisputed fact that the portion of the population of the United States which is economically and socially (*not* fashionably) lower, is most productive or better, reproductive. In the last three and a half decades the trend of European immigration has swung from the north to the south. Whereas previous to this period, four-fifths of the immigrants were Scandinavians, north Russians, north Germans, and from the English isles, during this period and up to the great war, four-fifths of the immigrants were from south and east Europe, and comprised Slavs, Balkan races, south Italians and Greeks. The result has been a significant change in the rate of Americanization of the new elements, and a tendency to segregation of racial types and perpetuation of racial customs and ideals. This is not desirable from the American standpoint.

Along with this change in the character of immigration, and perhaps closely related to it, has been a change in the relative rate of increase by birth of the two general groups. In the older,

more cultured and in some ways more highly civilized group, the birth rate has receded. In the newer, more dissimilar, less advanced, recently added group, the birth rate has remained high or has perhaps even increased over its normal rate for the same group in Europe. The result, of course, is a tendency to replace the socially and economically higher group, with the group which is more virile but of a lower mental and social development. In this lies the peril of the falling birth rate which seems to characterize most civilized nations.

In an address before the American Association for the Advancement of Science. Louis I. Dublin [1] draws an interesting comparison between the rates of population increase in France, England and what is now Germany. He notes that at the beginning of the nineteenth century France led with 29,000,000, Germany was second with 23,000,000, and England was third with a population of about 18,000,000. A century later Germany was first with about 65,000,000, England was second with some 45,000,000, and France was third with 39,000,000. Thus the German population had trebled, England had increased by two a half times, while France had increased less than one-half. In more recent years, he finds that the birth rates in both Germany and England have fallen considerably, although not to so great a degree as in France.

The National Birthrate Commission in England, reporting in 1916, stated that the birth rate had declined about one-third in the last thirty-five years and that the decline was due to a conscious limitation of the birth rate in the large mass of the population. Thus it seems that England is following close in the footsteps of France.

In the United States the rapid increase in total population has, of course, been largely facilitated by the high immigration rate. It has been further increased, as already noted, by the high rate of reproduction of the foreign-born rather than of the native stock. Dublin shows that there has been a pronounced and progressive decrease in birth rate in the United States for a period of years, and as in the case of France and England, the decrease has been selective and at the expense of the better and socially more valuable elements of the population. Cattell showed [2] that of 643 American men of science, the families from which they had sprung averaged 4.7 children each, whereas the families of these men themselves averaged only 2.3 children each. This figure is totally inadequate to maintain the status quo of the population, let alone providing for a healthy increase of population. Dublin quotes R. J. Sprague to the effect that in order to maintain equality of population, providing for infant mortality, adolescent mortality, unmarried individuals, sterility of marriage, and other minor factors, the average family must have almost four children.

In his arraignment of American national life, Dublin puts his finger unerringly on the point of fault. This he states, is the failure of the educational system to inculcate national and altruistic ideals. "Our young men and women must be taught to realize early that we do not live for ourselves; that our intellectual, economic and social advancement must be carried forward not only as a tradition but more especially in terms of new vigorous and worthy personalities. Our educational system must make our various racial groups conscious of their best traditions and instill desires to see their better strain strengthened and increased as a foundation of the greater democracy of the future."

Many things can be brought to assist this desired end. Among these may be noted various economic premiums on larger families, tax exemptions for children, and above all, the honor and respect of the community for the woman who devotes herself to the rearing of a larger family in place of a public or other career. The very fault which Dublin invokes will be summarily dealt with by the war. A new national sense, and a new sense of brotherhood and realization of the obligation of service, will be among the inevitable sequents of the war. In fact they are developing during the war at an unprecedented rate.

1. Science, March 1, 1918.
2. Scientific Monthly, March, 1917.

PHYSICIANS' REBATES FROM DEALERS.

It is an established principle of medical ethics that no physician should accept a fee from another physican for referring patients. A corollary of this makes it unethical for a physican to pay fees to *anyone* for referring patients. If it is true that some physicians persist in this reprehensible practice of fee splitting then they should receive summary action from their local societies and short shrift in the good graces of their more honest and respectable fellows. On these matters there is common agreement, at least in the medical profession. In the matter of rebates from drug houses, for patients' prescriptions, and from surgical manufacturing houses for apparatus and appliances ordered for patients, there seems at first glance to be a decided difference. And yet, as we pointed out last month (Physicians' Commissions and the A. M. A., Editorial), exactly the same principle is involved. The patient has a legitimate right to know to whom and for what he is paying his money. The physician has no professional or ethical right without the knowledge of the patient, to collect two fees for the same service rendered.

This matter is succinctly and honestly stated in a letter from the proprietor of a surgical appliance house. The following is commended to the thoughtful attention of physicians:

"Replying to your query regarding our current practice for rebates or commissions to physicians who send us their patients for surgical appliances, will say that since December 1st we have not paid commissions in any form to any physicians. We adopted this ruling for two reasons. One is the impropriety of such a practice and the other is the increased cost of both raw and finished materials, and to continue this practice would necessitate a

much greater price to the consumer than is now charged. We are much pleased to say that we have on our list a large number of physicians who have answered our rebate check with a letter stating that they could not conscientiously accept a commission from us inasmuch as they had made a charge to their patient which they considered sufficient. This is purely a business proposition with us and if we find that our business through the physicians very materially decreases through this practice, we may find it necessary in the future to resume this sort of business."

Notice two things: First, the physician can not expect the dealer to hold a higher ethical standard than does the physician himself. If this particular firm reverts to the old custom, it will be a step backward and downward, and will be due to lack of support from physicians who prefer to receive rebates. Second, the letter quoted shows exactly how the patient has been forced even without his own consent to pay much more than the article was worth, in order that the physician might be given a rebate. The custom of such rebates is doomed and ought to be rendered obsolete by the medical profession. The custom will die as soon as all physicians are allied with those quoted above who returned their rebate checks. The dealer will render the service which pays the best and it is no hard matter to make it a paying proposition for him to be honest in his service charges. For after all, there is not the same obligation on the dealer to stop rebates as there is on the physician. The honest and honorable physician will not accept such rebates and will not deal with houses which offer them. JOURNAL advertisers, to the best of our knowledge, do not give rebates. Their goods are offered at fair prices and that is still another reason why every physician in the state should patronize our advertisers. The stamp of the JOURNAL insures honesty and no fee splitting.

NEW PLANT FOODS FOR MAN.

The effects of the war on food economics and metabolism, bid fair to far outlast the war in many respects. One permanent and valuable result will doubtless be a recognition of new articles of diet which have values not hitherto noticed or employed. Along this line, C. H. La Wall [1] contributes an interesting and valuable study of plants which are available now as food which were not considered in any wide sense previous to the war. He aptly states that we have food conservation and also food conversation, and both have a legitimate place. The trial and introduction of new articles of diet may well bring valuable additions to the regime of civilized races. That this has occurred in the past, is shown by Dr. Johnson's characterizing oats as "a grain fed to horses in England and to men in Scotland." The changed sentiment regarding tomatoes, and the original limited habitat and use of corn and potatoes are also cases in point.

La Wall notes the nutrient properties of alfalfa which has a high food value and a low cost, and is chiefly handicapped by a large percentage of crude fiber. Chinese cabbage, cactus, cardoon, a mammoth celery chiefly grown in Europe, celeriac, chayote, chard, chicory, and cotton seed flour are enumerated. Dasheen is a new tuber, that is, new in the United States, resembling the common elephant ears in appearance, of which the yield per hill may run as high as twenty pounds. It has food value some 50 per cent. higher than potatoes, and is prepared and eaten much as are potatoes. It is similar to the taro and should not be more expensive than potatoes. So far it is chiefly found in the groceries of Chinatown.

Attention is called to the enormous food loss from unused "rose hips," the red fruits of the wild rose which are so common in many sections of the country. They are not edible raw but should be made into preserves and confections. The soy bean is another unused source of nutrition and differs from typical beans in having much more protein, less carbo-hydrate and more fat. Its caloric value is 1970 per pound. The addition of rice to a soy bean dietary gives a well balanced diet.

The Bureau of Plant Industry of the Department of Agriculture is endeavoring to introduce new vegetable foods which in many cases are already in use elsewhere in the world but have not received proper attention in the United States. It is an important and fascinating subject and well worth some study from physicians.

1. Amer. Jour. of Phar., March, 1918.

NURSES FOR THE NAVY.

The Navy Department has issued a call for an unlimited number of hospital corpsmen for duty on board ships as soon as they finish the required course of instruction at the Naval Hospital Schools. For several weeks enlistments in this branch of the service were practically closed on account of the congested condition at training stations. The congestion is now relieved and the Department desires to fill all schools immediately. Enlistments will be open for a period of one month, unless enlistments exceed present accommodations for training.

Enlistment in the hospital corps of the Navy will afford the average student or nurse a splendid opportunity to serve our country and at the same time continue studies and gain advancement. Many surgeons throughout the state may be able to suggest this branch of the service to friends and relatives who are eligible for enlistment and who most likely would not otherwise receive competent advice and information along these lines.

Experience as a nurse or knowledge of pharmacy is required for applicants who desire to enlist in the rating of hospital apprentice, first class. No practical experience or especial qualifications required for applicants who desire to enlist in the rating of hospital apprentice, second class; except that the applicant must have had an average general education. Examinations will be conducted by the medical officers at the recruiting stations of the Navy.

MANUSCRIPTS FROM MEDICAL OFFICERS IN ARMY.

The large number of medical officers recently joining the medical department direct from civil life, and unfamiliar with the Army regulations governing the publication of scientific papers, has resulted in a number of papers being published in various journals without authority from the Surgeon-General's office. At the request of the Surgeon-General of the Army, all manuscripts hereafter received and accepted for publication, from doctors in the service, unless already properly and officially approved, will be forwarded direct to the Surgeon-General's office in order to obtain such authority. To avoid this, medical officers desiring publication of professional papers will submit two copies to the Surgeon-General with request for permission to publish same. Upon approval, a copy will be forwarded to the journal designated by the officer for publication.

EDITORIAL COMMENT.

The New York Evening Post sings a dirge over the deaths of the Great Patent Medicine Trinity, Hartman, Munyon and Ayer, in the following words: "To-day the bleak winds are howling across the fast-emptying seats of the patent Olympians. We cannot escape a sense of poignant regret which attaches to all Götterdämmerungs. Like the art of the Greeks which sank with the disappearance of the bright gods, our own landscape is bound to suffer. The Jersey meadows and the immemorial rocks along the New York Central no longer blossom with the forms and visages of these demiurgic preservers and restorers of Life, Health, Beauty, Hope,—of these slayers of the dragons of rheumatism, asthma, sick headache and that mysterious pain in the back when you get up in the morning. . . . Acute observers of American civilization used to dwell on the lust for patent medicines as an outstanding national trait. More properly it should be called an Anglo-Saxon trait. The most superficial study of English railway stations and London buses will demonstrate that passion for paper-wrapped tonics must have been brought over from England together with the language of Shakespeare. It is still difficult for the foreign traveler, longing for the first glimpse of Magdalen tower, and the Bodleian, to determine whether he has really got off at Oxford or at a place called Horsley's Health Drops. Visitors bound for the Bank of England have let many an omnibus pass by under the impression that the latter were bound for Bovril's or Eno's. An Anglo-Saxon trait with this conspicuous differentiation perhaps, that England has a preference for pills, while we concentrated on brown bottles. It is easy to imagine how the historical investigator of the future will reconstruct out of our advertising columns an entire American mythology. Munyon the health-giver for Apollo, Father Duffy for Aesculapius, Old Father John for Cheiron, Lydia Pinkham for Ceres the Nourishing Mother."

It should be within the province of the Board of Health of every town and city so fortunate or enlightened as to have such an institution, to control certain public nuisances. The abatement of the smoke nuisance is among such police powers which should appertain to the Board of Health. This can be accomplished by proper combustion and arrangements for complete consumption of carbon and gases from furnaces. Few things detract more from a city than a pall of smoke and few things are more annoying than the soot and gas from an uncontrolled furnace. Smoke may not have a definitely deleterious effect on health in moderate amounts, although this even is not certain, but it detracts from the peace of mind and efficiency of every person exposed to it, and thus is opposed to the public health. The abatement of nuisances is a necessary function of the health office and should include the prevention of singing cats, and the midnight piano-player, as well as the raising of live stock in closely settled districts and the proper disposal of sewage.

The newspapers of San Francisco are publishing extensive advertisements of a preparation known as "Tanlac." In this publicity matter, apparently paid for by the Tanlac Company, there are, of course, numerous testimonials and the usual line of quack medicine endorsements. Physicians and laymen alike would do well to turn to page 1114 of the Journal of the A. M. A. for April 13th, where they will find a testimonial entitled "Tanlac Testimony from the Tomb," with death certificate appended. This particular testimonial is commended to the earnest attention of those newspapers which publish the Tanlac advertising.

It is requested by the Hygienic Laboratory of the United States Public Health Service that physicians send to the Hygienic Laboratory, Washington, D. C., samples of any lots of arsphenamine and neo-arsphenamine which have shown undue toxicity in clinical use. It is important in sending these samples that the lot number is the same as that of the ampule actually used on the patient. The sample should be accompanied by a brief note stating the approximate body weight and age of the patient, the dose and dilution of the drug given, the symptoms and result.

This request is made because of reports in current medical literature of untoward results in the use of these arsphenamines.

Fatigue in its relation to health has been the subject of many investigations. With the beginning of the present world war and the immediate need for soldiers, sailors and munitions, the question became one of great importance. The effects of fatigue in the making of soldiers, sailors and munitions should be very carefully watched with a view to maintaining the output of training camps and munition factories at its highest level during the war. No necessary sacrifice of men should be questioned at this time, but when meth-

ods employed for speeding up this output are liable to "invite disaster," such methods should be carefully revised.

In the investigations made into the prevalence of communicable diseases by the Division of Sanitation, Bureau of Medicine and Surgery, Navy Department, the conclusion was reached that fatigue was a factor in their spread, and that "the attempt to make a sailor too rapidly is to invite disaster."—Public Health Report.

The Bulletin of the Federation of State Medical Boards states editorially that the attitude of the Federation in the matter of standardizing medical schools has been more clearly defined and the firm stand taken on premedical college requirements, conditions and advanced standing will meet with responsive approval from state boards and medical educators as well.

Whatever may be said against health insurance, one good feature would undoubtedly be the urge toward improved sanitation in working quarters and conditions. The emphasis on disease prevention would be increased, to the mutual advantage of employer and employee.

Original Articles

REGULATION OF THE PRACTICE OF MEDICINE IN CALIFORNIA SINCE 1914.*

By HARRY E. ALDERSON, M. D., San Francisco.
(Associate Clinical Professor of Medicine, Stanford University Medical School; Member California State Board of Medical Examiners.)

The present Medical Practice Act first became effective in August, 1913. It was amended in 1915 and in 1917. A movement is under way to have it further amended. Each amendment is apt to mean a weakening of the law. The object in presenting this paper is to stimulate interest in the direction of preventing further unfavorable changes by the legislature to meet early in 1919. The California State Medical Society is large enough and powerful enough to prevent the passing of freak medical legislation if it will only use its influence.

The regulation of the practice of medicine under existing conditions is almost as difficult as the attempted regulation of religions would be. In fact where religion has been permitted to assume the responsible role of medical practice it has been able to place itself outside the control of the laws regulating practice. Eddyites and other religio-medical masqueraders may practice without licenses and assume full charge of the sick in every way without being subjected to the usual legal restrictions that apply to doctors. So far, however, they have not been authorized to sign death certificates. This is a great source of embarrassment to them, for their deaths are many, and it is said that they are going to try and have laws passed permitting them to do so.

Our Medical Practice Act represents an effort to place medical regulation on a purely educational basis (the only rational thing to do) and when properly and fully enforced by the Board of Medical Examiners it offers the very best protection of the public. The mentioning of cults and sects by name is carefully avoided. This is a good feature of the law, and as far as possible this paper will carry out this idea. It may be of interest, however, to name the various so-called "schools," cults, and sects, all of which properly come under the heading of *drugless practitioners*. They place themselves in this classification whenever they ask for special legislation providing special exemptions and special forms of licenses. The following list of drugless "schools" while practically complete at this date is constantly growing: Osteopathy, chiropathy, naprapathy, naturopathy, eclectic chiropathy, pantherapy, electrotherapy, actinotherapy, neuropathy, mechanotherapy, neurology, spondylotherapy, eclectic osteopathy, suggestive therapy, psychotherapy, and magnetic therapy. It will be observed that therapy constitutes the "raison d'etre."

Some of those who are spending much money and effort to obtain special privileges for their followers in the direction of removing legal educational requirements are honest in their belief and they fight and plan with all the zeal of religious fanatics. Most of them, however, when their efforts are analyzed, are proven to be ordinary fakers attempting to gain by questionable means privileges for which they are not in any way fitted. They aspire to all of the rights that are enjoyed by those who, by devoting many years of study in universities and Class A medical schools, have properly fitted themselves for the responsible duties of a physician. They aim to force short cuts to the practice of medicine. They first ask for very special or limited licenses. When they once gain the same, they do not adhere to these limitations, but attempt to do all kinds of medical and surgical work for which they are not trained. In this way they prove the insincerity of all their claims.

The regulation of the practice of medicine is for the protection of the public. Without a proper examining and licensing system, the quack situation (which is bad enough as it is) would soon constitute an extremely serious menace to public welfare. Conditions would result which would bring about most insistent demands by the public for protection. The removal of legal barriers that are designed to prevent (but do not always succeed) the practice of medicine by ignorant and uneducated would-be doctors, would undoubtedly result in an increase in the amount of sickness and disability. This of course would really increase the amount of work for doctors generally. The regular medical profession, however, through the highest motives are constantly trying to increase the protection of the public by increasing educational requirements for those aspiring to practice medicine. Advocates for *lower* educational standards argue with legislators that the medical profession is "trying to cut down competition by making it more difficult to obtain licenses," etc., etc. Some legislators seem only too eager to believe this. When you discuss these matters with your senators and assemblymen it is extremely

* Read before the Forty-seventh Annual Meeting, Medical Society, State of California, Del Monte, 1918.

important to make clear to them the fact that the State Medical Society is not trying to limit the number of well educated and completely trained physicians and surgeons. To the contrary we feel that the more of such men there are the better will it be for humanity. We are trying, however, and some of us will keep on trying (no matter how discouraging the outlook) to see that the State Board limits to the smallest possible number those who are not mentally or morally capable of doing their full duty toward the sick public. As soon as the public realizes that they are entitled to more protection in this direction they will not permit any of their representatives in the State legislature to lower educational barriers. They will demand the passage of laws making possible only fully trained doctors,—and then will demand that these laws be enforced. Should health insurance become the law of the land, when the doctor will cost the patient practically nothing, he will promptly demand of the state the best and most profoundly educated doctor, and will be satisfied with nothing else.

Unfortunately this question has often been considered a matter for political consideration rather than a purely educational problem. This applies not alone in California but has held elsewhere. Many states have placed political considerations in the background so that now there are only a few states that are lagging behind in this phase of medical progress. One trouble is that our powerful State Society in the past has felt impelled by a peculiar combination of circumstances to refrain from taking an official part in this fight. On the other hand the leaders of the various cults, sects and special interests (representatives of low grade, commercial colleges) have raised much money, developed aggressive political organizations and by various means impressed those controlling state affairs with their political importance. They have made an impression *all out of proportion to their real importance.* Should our State Society devote one-third this energy the political "powers that be" would very promptly recognize our legitimate claim to consideration. The official organization of the regular medical profession, which includes all of those with complete medical training, the leaders and investigators in scientific medicine and research workers and teachers in the universities, and the only medical body recognized by the United States Government, is most certainly the one to consult in matters pertaining to medicine and surgery. It should only be necessary for our representative to state our position in regard to various state medical matters to the Governor and others in control at Sacramento, to ensure the adopting of only safe and sane medical legislation.

The present Medical Practice Act is a good one. It makes it mandatory on the board to place the entire question on a purely educational basis (the only logical ground on which to stand). All practitioners are divided into two classes—*Physicians* and *Surgeons* and Drugless Practitioners. The law also provides for the examining and licensing of chiropodists and midwives, but that will not be touched upon here.

There is absolutely no mention of cults or sects. This feature constitutes a great improvement over other acts because cults and sects in medicine seem to be designed largely to provide short cuts to the obtaining of licenses through special legislation. There are some cults, sects and schools where the originator probably thought he had discovered a new principle of treatment. Instead of investigating the idea in the careful systematic manner of a scientific research worker and finally presenting the evidence before a learned body capable of passing judgment, the "discoverer" usually founds a new "school," invests in a little equipment, advertises for students and proceeds to make money. It is the financial aspect of the thing that appeals to these great (?) discoverers and this is the root of the evil. The ease of obtaining the necessary training by paying the fees, of course, and a license, and the *quick financial returns* are always emphasized by these people in their advertising literature.

A letter written by a prospective student in December, 1913, to the largest "school" of this type received a very prompt reply in the form of a long letter, a catalogue and an elaborate illustrated souvenir, all of which emphasized the commercial character of the concern. The letter warmly congratulates the prospective student "upon having been awakened to an interest" in this work. Then follows the statement: "If you pursue the course, I am sure you will always look back upon it as the most favorable step in your *business* life!!!" The letter goes on to state that "most of the professions have become so overcrowded that there is no longer a fair promise in them," etc., etc., and that there is but one of this cult to each 25,000 persons while there is one M. D. for each 400 persons, and that at the present rate of graduation the demand for representatives of this cult cannot be supplied for twenty years!! After referring to the *money making* opportunities and the chance to help humanity (?) the following illuminating statement appears: *"There is often a disposition on the part of the prospective student to magnify the difficulties"* of acquiring this special kind of training and a license. As a result of steady pressure exerted by the State Board of Medical Examiners and with the co-operation of some really progressive members of the cult sincerely desirous of bettering conditions, this school has improved its facilities greatly. They aim to qualify their graduates for unlimited physician and surgeon licenses. They only require for matriculation, however, a high school diploma, *or its equivalent* and the college year in physics, chemistry and biology required by our law is not exacted of all their students. A report on the institution recently given me by a recognized authority in these matters states that this work was not required of 29 of the 35 admitted to the freshman class, and that as a result of the inspection the school could not at the present time be rated higher than 20 to 25 per cent. as compared with medical colleges. And yet they insist that they give as good training as may be had in a medical college!! The report goes on to state that "There was practically no teaching from the standpoint of clinical departments by members of this school's faculty, since on the entire faculty

only one M. D. appears. Such clinical teaching as the students obtained was by sufferance on the part of teachers of medical schools on the staff of the County Hospital. The clinical material at their own hospital was limited, and of these cases the histories were very poorly kept. The laboratories were very poorly equipped, but above all, the teachers have had no medical training whatever, and it is doubtful whether they have had any reliable training in the subjects which they are endeavoring to teach. Medical educators generally have been unable to understand how graduates of this school can be expected to qualify as physicians and surgeons. "It would seem more logical to allow nurses to practice as physicians and surgeons," since nurses "obtain their training in hospitals, under physicians and study the care of hospital patients by physicians." For these reasons the Federal Government has denied exemption from the draft of students attending this institution.

The greatest efforts made by the "drugless" organizations have been:

First—To encourage all who lack the necessary basic education required to enter a modern medical school, to take up work in their "school."

Second—To build up a strong political organization for the purpose of influencing those in control of legislative and governmental machinery.

Third—To influence legislators to remove barriers that prevent those lacking at least a real high school education and a year in physics, chemistry and biology, and a complete four-year medical training from practicing medicine and surgery.

Fourth—To prevent, if possible, the successful prosecution of those of their number who attempt work (major surgery or drug prescribing, for instance) which the law prohibits their doing.

Fifth—To advertise their "business" and thus induce larger numbers to enter their "diploma mills," spend their money there, and *buy their books,* and perhaps bring them "consultation work."

These various cults have this much in common: they are interested in seeing educational barriers removed. Some of them are sincere in their belief that they are able to do something for humanity, but most of them are "on the same side of the fence" when it comes to influencing legislation. The more enlightened ones of course would like to have standards higher than those lower down the scale, but *"not too high."* Illustrating the attitude of the supposed "higher ups" toward the less fortunate of these various cults the following incident may be of interest. Several years ago at a hearing on medical laws the governor asked of the crowd present, the difference between osteopathy and chiropractic. A representative of the osteopaths promptly said: "Chiropractic represents the first three weeks in osteopathy," whereupon the chiropathic representative objected and asserted that his cult was more advanced than osteopathy. And then the battle was on!

Of these various drugless cults the representatives of the one now in the lead are not satisfied with the very *low* requirements desired by most drugless healers, but they do not desire as high requirements as good medical schools demand. And they are depending upon the political power of their organization to weaken the law in their interest. For instance, they want to have a high school diploma, *or "its equivalent,"* made the maximum preliminary requirement. This phrase "or its equivalent" is a dangerous one, for it can be seen how a lenient board might accept almost anything (for instance, several years' experience selling real estate) as the equivalent of a high school education. I am advised that the organization referred to is also going to try to have the "year in physics, chemistry and biology of college grade" (which after January, 1919, will be necessary) taken out of the law or so modified that this work can be given along with the four years of medical work! Their leaders, who are keen, shrewd men with business and political instincts well developed and sharpened through years of fighting to gain special privileges, assume a desire to improve medical educational conditions. Their actions belie their words as amply proven time and time again. Their record is one of trying to keep standards *lower* and to adhere as closely as possible to minimum requirements of the law instead of really elevating standards. It can be said that the better element amongst their number today represent the type of physician produced by a Class B school twenty years or more ago with the difference that they lack the training in materia medica, pharmacology, therapeutics, bacteriology, pathology, diagnosis and general surgery, etc. Their organization has as a nucleus a largely attended college which could be considered a good drugless college, but which they insist upon being given exactly the recognition granted Class A medical schools. They admit that they do not give a complete medical training and refuse to do so. The board has given them temporary approval. During one year their demands for approval were successfully resisted and they were accepted as a drugless practitioner's college only. All that time they exerted their political power to the utmost, threatened legal action, initiative procedures, etc., but without avail. They have improved their school and now stand approved, however, and in this way our standard at present is set. Naturally every college better than this standard has to be approved! Through a recent amendment to the law which permits them to qualify for an unlimited physician and surgeon license by taking an "oral, clinical OR practical examination" a considerable number have gained these licenses. A very large percentage who took these oral examinations, however, failed to pass. License or no license, many of them prescribe drugs and perform surgical operations and have been doing so for some time. The records of the Industrial Accident Commission, the State Compensation Insurance Fund and various insurance companies show instances of such practice, and also that they bring strong pressure to induce payment of their claims for services, when refused.

Probably the best way to classify practitioners of these various cults and sects would be to say that they are specialists in the narrowest sense of the term. Their exponents base their claims for special consideration by legislators partly on the fact that they have a very special system or method of treatment and that it is not necessary for them

to have the broad education demanded of doctors of medicine. But once they obtain the desired special legislation and then the coveted special licenses, they are not willing to be limited in their work. They are inclined to use drugs and the surgical knife. A recent licentiate who worked for the drugless practitioner feature of the law and whose good recommendations and good record at the board's oral examinations gained for him a drugless practitioner license, has very recently applied to the United States Government for a narcotic license (Harrison Act)!!! They gain their ends by claiming that treatment is the all important part of practise. Every effort should be made to impress upon your senators and assemblymen the fact that therapy is not the only thing. It does not matter what specialty, system, cult, sect, or "school" an applicant may profess to follow provided he has sufficient education. At least one year of physics, chemistry and biology of college grade, in addition to a complete high school education and then a complete four-year medical course, should be required of everyone applying for an unlimited physician and surgeon license. The various groups of drugless practitioners are not satisfied with limited licenses. The law provides for them a drugless practitioner license which permits them to do all that they advertise that they do. That part of the act defining the educational requirements of drugless practitioners and the legal scope of their work is very good. When it comes to asking for a lowering of educational requirements for their followers, these people make a great point of the claim that they are not asking the privilege of practicing medicine and surgery, but wish to do only very limited work which does not require the training necessary for an M. D. degree.

I am informed that various "drugless" cults are combining now to have the legislature do away with some of the best protective features of the law which include the required year in physics, chemistry and biology and also the requirement that all colleges must be *approved by the board* before their graduates can take the state examinations. The examinations are easily passed by any one with a good memory and a fair amount of training. They extend over a period of only three days and are all written. These are no practical tests. A general average of seventy-five per cent. is required, and a candidate may fall below sixty per cent. in two subjects without failing. The test is largely one of a parrot-like ability to repeat what a candidate has crammed into his brain for this special purpose. Written examinations of this sort are not sufficient in themselves to properly gauge a candidate's ability to make diagnoses and meet the responsibilities that come to every physician and surgeon. As far as they go these examinations are good enough and the board has done its best to make them comprehensive. But as the principal and all-embracing test they are far from sufficient. The "drugless" element is strong for these written examinations and bitterly opposed to thorough practical tests. If the examinations are to be the sole test they should be made thorough and should be practical as well as theoretical. They should extend over a much longer period, say one or two weeks. They should be conducted in the laboratory as well as in hospital wards. This method is carried out successfully by the National Board of Medical Examiners. Our law makes such examinations possible through the appointing of special examining commissioners (not necessarily from the board) to serve from time to time. This has never been taken advantage of, but there is hope that it may be some day. As matters are now, it is vitally important to scrutinize the applicant's credentials thoroughly. If this valuation of the credentials is thorough the written examinations are relatively unimportant.

Periodical thorough inspection of all medical teaching institutions in California should be made after the manner of the Council on Medical Education of the American Medical Association. So well recognized has become the A. M. A. classification of medical schools, that many states have officially adopted the same. Many that have not done so have unofficially depended upon this classification in passing upon candidates' credentials. The California State Board of Medical Examiners during the past four years has made several investigations of California schools. Over this very question much difference of opinion has arisen. It is a very difficult proposition. Out of it all, however, has come some good. Colleges have been forced to improve their physical equipment, faculties and general teaching facilities, but still there is much to be desired in this direction.

In these serious times we should endeavor to cooperate with the Federal Government to the fullest extent possible. We should strive to maintain educational standards high enough to ensure that only properly educated medical men are made ready for the Army and Navy. The Federal Government well recognized its responsibilities in this direction by temporarily exempting from the draft students attending well recognized medical schools (that is, schools approved by over fifty per cent. of the states). Upon completion of their education these students enter the service as medical officers. In this way, only Class A and B schools of the Council on Medical Education Classification of the A. M. A. have become approved. We should at least make the minimum requirements of our Federal Government our minimum requirements. Our duty to the public is particularly pressing now that so many of the best physicians and surgeons have gone into the Army and Navy. Some communities are thus left without competent doctors. It is clearly in the interests of public health that only competent doctors should fill these vacant posts.

The "approval by the board" clause is vitally important. Attempts are going to be made to have it removed from the law. As a means of compelling institutions to do honest work and maintain proper faculties and equipment, it is most important. The State Board of Medical Examiners is the only barrier that stands between the public and the hordes of would-be doctors many of whom with no training at all think that they have been endowed by God or someone else with special ability to cure without diagnosis.

The representatives of the drugless schools have tried hard to have this "approved by the board" clause removed. They admit that a college ought to meet certain requirements in the way of physical equipment, but they insist that this can be set down in black and white, leaving nothing to the discretion of the board. To use a favorite expression of theirs, the law should provide a definite "yardstick" by means of which *alone* one should judge a school. Their idea is to have a few formal easily met requirements set forth in the law, possibly specifying the number of lecture rooms, chairs, tables, desks, blackboards, electric lights, bottles, charts, etc., and by complying with these few simple requirements force the board to approve of their schools. The real worth of a college does not depend upon physical equipment, but rather on things that cannot be "measured" in this way. The character and qualifications of the faculty, quality of the work done, the scientific spirit, the care that is taken to see that the students are properly instructed, and the records of the graduates of an institution, are all things that cannot be measured by a "yardstick." The existence of a large student body does not necessarily mean that a school is a good one. It may mean that the requirements for admission are low and the work offered easy. Commercial institutions of that sort are bound to have as many fee-paying students as their promoters can induce to attend and the minimum amount of profit-consuming equipment. "Diploma mills" pay good money and the "educators" (?) that they attract are not the kind to do honest constructive work. A properly conducted modern medical school costs money to run, as a rule five times as much as taken in fees being spent per capita. The State Board has a certain responsibility in this matter of regulating schools that may be lost sight of. It is the responsibility to the individual student who may enter one of these schools, spend time and money only to find that he is working for a diploma that will be worthless and not recognized outside the state. To my knowledge this has occurred several times. As a means of compelling teaching institutions to give their students an honest return for their time and money, the "approved by the board" clause should be retained in the law.

Reciprocity with other states is much to be desired. In the beginning our law provided for a one-sided reciprocity—i. e., we granted reciprocity licenses to licentiates from other states, but were not permitted to require the return of this privilege. Fortunately it was possible to have the law amended later permitting us to make contracts. The purpose of the original arrangement seems to have been to keep us from being placed in a position where other state boards would demand that we raise our standards before they would accept our licentiates. You can see here the fine hand of parties responsible for this legislation who were vitally interested in keeping down the standard within our state. After four years of "reciprocity" during which time California has extended the courtesy with a free hand to licentiates from most of the states, there are very, very few that have actually reciprocated with us. However, many states now have signified a willingness to accept our licentiates *provided their college credentials are satisfactory*—i. e., equal to Class A and B schools.

Composite boards would be all right if the members could be made to realize that their first duty is to the public. But the trouble is that on account of the very fact that men are selected from different cults and sects, they are apt to consider that they represent these special interests. This feeling that members are appointed to satisfy the different interests is responsible for lack of harmony.

As a matter of fact, the board is supposed to represent the public whom it is sworn to protect. The members ought to be appointed to administer the law without regard for cults, sects and interests. There is nothing in the law to prevent the Governor from appointing a board made up entirely of members with a complete medical education. Such men surely would be the ones best qualified to enforce the law in the interest of the sick public. There is a provision in the law which permits the board to appoint special examining commissioners. To satisfy the various cults and sects the board, from time to time, could appoint specialists representing these cults and sects to give part of the examination. Surely no one would object to such special examinations, provided the candidate were examined by experts in all the fundamentals of medicine. Our law provides the means of handling this troublesome question in a manner that ought to be satisfactory to all honestly concerned in seeing the giving of licenses based on merit only.

The prosecution of violators of the law is a large subject and will be left for a future paper. One of the troublesome problems confronting the board has been that of stopping the practice of surgery and the use of drugs by those whose training and limited licenses do not warrant such practice. There are many who are openly and defiantly doing this in violation of the law. Why they are able to do this will be made a subject for special discussion in the near future.

The outlook for the future is fairly good. With a growing realization of the importance of keeping the regulation of the practice of medicine on a purely educational basis it will be increasingly more difficult to weaken the force of the law. With realization of the fact that the members of the board are appointed *solely* to enforce the law for the better protection of the public, will come the much desired elevation of educational requirements. Those trying to induce legislators to lessen this protection grossly insult the great majority who are sincerely desirous of seeing that the public is provided only with educated and capable physicians.

The legislature will meet in a few months and we may expect the usual assaults on the Medical Practice Act. Each session has seen less and less of a desire on the part of legislators to change the law. It is hoped that this time no changes will be permitted. Great preparations are being made by the drugless bodies, the amalgamated quacks

and all interested in doing away wtih barriers that keep the uneducated, half educated, mentally and morally unfit from practising on the public. Funds are being raised and material is being prepared for the great biennial drive, the great winter offensive. We may expect much mud-throwing and the usual efforts to cloud issues so as to hide the real motives of those wanting to amend the law. A favorite line of attack is to go after an imaginary "medical trust" and try and make it appear that it is striving to cut down competition by keeping worthy candidates from obtaining licenses! Another favorite one is the "poor boy" argument! Why not let the poor boy who has no basic education, take a short course in one of these schools and gain the wonderful knowledge and skill made possible by their teachers in a few months? Why deny the poor man who does not want "high toned high brow doctors" the great privilege of having these "short cut" geniuses? If some of these people had their way we should have night schools and correspondence schools of medicine in large numbers in our midst, for they pay the promoters well. From the beginning of a session of the legislature to the end, these people have well paid, active, aggressive representatives on the job day and night. They begin their work long before legislature convenes. In fact some of them keep up their propaganda constantly. Although these different cults and sects have relatively few followers when compared with the medical profession, they have very active aggressive organizations that make an impression all out of proportion to their legitimate importance. They keep constantly working on the Governor, his advisors and the legislature. On the other hand, our great State Medical Society remains more or less passive until the eleventh hour, and then, unless something very vital is at stake, it does little when it might do a very great deal. *Legislators as a rule do not want to pass bad laws.* But when they feel most of the pressure coming from one direction for or against a bill it is perfectly natural for them to be influenced. The average senator and assemblyman wants to be guided by the "voice of the people" and he is very much interested in telegrams, letters, petitions and delegations that come in the interest of any bill. The representatives of various cults desiring special legislation make full use of this fact and through their organizations see that on a given signal, telegrams, letters, etc., pour into Sacramento from every part of the State. It is remarkable how very numerous are these messages sent to the Governor's office for or against medical bills awaiting his endorsement or veto. The California State Medical Society with very little effort can make its great influence felt in this way on behalf of *sane* medical legislation. Not only would its assistance in this manner be welcomed by those in authority in Sacramento, but the state board itself would respond. As the organization of the greatest number of licentiates in the state, with its members amongst the leaders in every community including also the teachers in the universities and colleges and the leaders in scientific medicine, our advice properly presented is most certain to be heeded.

ARTHROPLASTY OF THE HIP JOINT, MURPHY METHOD. REPORT OF FOUR CASES.*

By J. M. BURLEW, M. D., Capt. M. R. C.,
Surgeon 360th Reg. Inft. N. A.,
Santa Ana, Cal.

I believe that the cases I will report will justify your attention, in that I will endeavor to show that the operation of arthroplasty of the hip joint, as taught by the lamented John B. Murphy, is a highly practical and justifiable operation, even in the hands of those who are doing limited surgery, and are less adept than our specialists. The results obtained are so satisfactory that it should be urged in all cases at the proper time to restore the patient to a normal condition in life, and done before secondary deformities, as tilting of the pelvis and spinal curvature, intervene. We freely admit that such a condition as an ankylosed joint should almost never occur; that prompt attention to the tuberculous, and immediate aspiration, injection and extension, of the septic joint, would prevent such a pathological state and preserve the joint in its normal state. But so long as it is human to err, such joints will present themselves for our correction.

I will give you a very brief history of four cases upon which I have operated.

Case 1. Mrs. T., age 26, housewife. In 1906 had a miscarriage at two months and seemed to do well, but discovered about two weeks later all was not well and was curretted at her home. Was up in one week. Three or four days later was taken with high fever and darting pains in right hip, which soon were continuous. This continued for about 10 days, gradually getting worse, when she was taken to the hospital and an opening made just below the right inguinal region, which discharged considerable pus.

At irregular intervals from this time on new openings were made with pus discharge and with necrosed bone, until finally in 1909 she left the hospital with right hip ankylosed at an angle of 25 degrees and right knee flexed at 25 degrees and partially stiff.

In this condition she came into my hands and was operated upon on March 27, 1914. She had an uneventful convalescence. The pictures and x-ray plate show the result. There is some shortening due to loss of bone about the pelvis and head of the femur but the joint has as free motion as the left. The knee joint has, through use, returned to normal. It has given her a very serviceable leg.

Case 2. Mr. H., age 26, teacher. Gives an uncertain history of tuberculosis of the hip joint finally resulting in complete ankylosis at the age of 12. Since that time has walked with an extension on his shoe. Gradually curvature of the spine developed. This was followed by trouble in the 12th dorsal vertebra resulting in a marked kyphosis at the dorso-lumbar joint. Walking and sitting put a strain upon this, rendering it painful to such a degree that relief was sought. It seemed to me that a joint to relieve the right hip, would remedy the trouble, and so the operation was urged. It happened that Dr. John B. Murphy was visiting in Pasadena at the time. Mr. H. learned of this and wrote Dr. Murphy, stating his condition, and asking advice. Dr. Murphy examined him, studied the x-ray picture, told him, "Your chances of success are about 80 to 20," and advised the operation. This is another instance showing where

* Read before the Southern California Medical Society at Redlands, May 3, 1917.

Case I. The operated joint.

Case I. Free abduction.

Case I. Angle at which hip was ankylosed.

Case II. Note scoliosis, kyphosis and pelvic tilting.

Case II. Shortening.

Range of motion after operation.

Free adduction.

Dr. Murphy's heart lay. The x-ray shows the hip dislocated baekward with a bony thickened neck obliterating landmarks. The operation was performed, following the Murphy technic as nearly as possible. Everything had proeeeded well, the bony union was chiseled away, and I was ready to make the aeetabulum, when a poeket of pus was opened. Had the pus been encountered earlier, drainage would have been established and the operation finished at another setting. Under the circumstances it seemed best to finish the work in hopes of sterile pus. However infection set in with a very stormy time, ending with discharging sinuses. These, under Beck's paste, have practically closed and, strange to say, we have a joint with limited motion, but enough to relieve the back, which is free from pain and apparently healed. This young man is now strong, walking without crutch or cane, riding his bieyele and leading an active life, happy in obtaining relief, though not to the degree hoped for.

Case 3. Miss D., age 17, when 11 years old gives history of condition of right hip diagnosed at the time as tuberculosis. Was treated by rest in bed, extension casts, etc., eovering a period of about two years, leaving the hip dislocated baekward with bony ankylosis, as is shown in the x-ray plate.

She was operated upon, the hip joint being exposed in the regular way and the bony union chiseled away, the aeetabulum deepened, head rounded, faseia flap sutured in place around the aeetabulum, and the wound closed in the usual manner without drainage. She was put in bed with Travois splint, and Buck's extension and 20 pound weight. She remained in the hospital seven weeks making an uneventful reeovery. She is now walking without cruteh or cane, and has very good range of motion.

Case 4. This little man, Virgil Hancock, has an interesting history leading up to his present trouble. Age 12, school boy. He was well and in good health until July 2, 1913, when a small red

spot appeared on the inner surface of the left knee, felt sore, court plaster was put on it. The next day pus was found under the plaster. Upon a physician's advice, antiseptic packs were applied to the knee and it gradually got well. On July 8th, the inside of the left side of the nose became swollen until completely closed. He then consulted a nose and throat specialist, who opened the abscess. It resulted in necrosis of the cartilage, causing the bridge to sink. July 10th, he complained of pain in right leg, this became worse with fever and chills, when his physician Dr. J. I. Clark, moved him to the hospital and asked me to help with him. Then began a series of operations, some under ether, others under local anesthesia. Wherever a metastatic process made its appearance, it was drained. Half of the bone of each patella has been curetted away. The right tibia has been opened in several places. A thrombus formed in the right internal saphenous vein, which was removed with a portion of the vein. Autogenous vaccine was used. The infection was the staphylococcus albus.

By Jan. 1st, 1914, we felt that we had pretty well won our battle over the infection. In the multitude of involvements, we had overlooked an infection of the right hip joint. Had this been aspirated, injected and extended we probably would not have had this result, but it escaped us. The openings in the tibia still continued to discharge, so in January these sinuses were curretted and followed by Beck's paste, which resulted in complete closure. In due time the boy was around. An x-ray picture showed bony ankylosis of the right hip joint. Sufficient time having elapsed to regain his strength, and all evidence of the infection having ceased for a number of months, on July 19, 1916, he was operated upon, following the usual technic. He remained at the hospital four weeks, the wound healing by primary intention. A few small pieces of bone that were not carefully wiped away in chiseling, came from the wound, causing some discharge. In eight weeks he was out of bed on his crutches, in ten weeks dispensed with his crutch and today is an active boy with good hip motion, which is gradually increasing and we think will be the equal of the left in a short time. Dr. Murphy states that maximum motion is not obtained in less than two years.

I will review very briefly the technic of the operation as taught by Dr. John B. Murphy.

The steps are as follows: The U-shaped flap includes the skin, fat and fascia lata. This begins about an inch below and to the inner side of the anterior superior iliac spine and extends just below the trochanter, ending about five inches behind the starting point. To gain more room a straight incision down the leg is made. The flap is turned upward. By means of the needle carrier, the chain saw is passed beneath the muscles from behind forward above the trochanter, down to the capsule. The trochanter is removed by sawing from above downward and outward. This is held upward out of the way, exposing the joint. The capsule is cut at a right angle to the fibers. The bony union is cut by means of the chisel. When complete, the head of the bone is rotated backward by an assistant. The acetabulum is deepened or formed with the chisel or reamer. The head of the femur is then smoothed and rounded for the joint surface. The fascia and a portion of the fat of the flap is dissected off from the point toward the base, leaving it attached at the base to give it circulation. The free end of the fascia is sutured around the acetabulum, being brought posteriorly to the muscle removed with the trochanter. The head of the bone is rotated into the acetabulum. The trochanter is brought to its place and nailed with a finishing nail. The muscles are sutured. The flap of skin is then sutured. The patient is placed in a Travois splint to maintain abduction and with Buck's extension to hold the joint surface apart, to prevent pressure necrosis of the intervening fascia. The extension weight for an ordinarily muscled adult is twenty pounds. This is maintained for about four weeks. Then the patient is allowed up on crutches each day. They will enjoy some weight at night at this time.

After the first week a little passive motion, gradually increased, will help the muscles. As soon as the patient is out on crutches, the leg is put through the motions of walking. Depending upon the stamina of the patient the leg will be doing full duty in eight or more weeks.

Success depends upon the following factors:

1. A joint that has healed, containing no walled-off pus pockets.

2. Absolute asepsis, exceeding that of abdominal work.

3. Complete hemostasis.

AMEBIASIS: ITS RADICAL CURE WITH COMBINED EMETIN AND SALVARSAN PRODUCTS.*

By HERBERT GUNN, M. D., San Francisco.

For some time after the introduction of emetin hydrochloride in the treatment of amebic dysentery it was believed by many that an amebicide had been found which, if properly employed, might be expected to destroy the amebae, relieve the symptoms, and result in most cases in a cure. While it is still held by some observers that it is an amebicide, it is conceded by most that it has no effect in destroying the encysted forms and that recurrences are the rule after clearing up symptoms by its use. Further, it was shown by Allen, Baermann and others that emetin does not destroy the amebae in the intestinal tract to the extent that the amelioration of symptoms would lead one to believe. Attention has been called repeatedly to the ill effects sometimes following the use of emetin, such as muscular weakness, especially marked in the lower extremities, and often persisting for weeks after the drug has been discontinued.

My own observations in a limited number of cases had been that while the acute dysenteries were usually relieved, often very quickly, and apparently cured by the use of emetin, recurrences were the rule, amebae being demonstrable in the stools within a month and symptoms recurring within six or eight months. The impracticability of clearing the stools of amebae with reasonable doses of emetin hydrochloride was well demonstrated in several cases of this series, especially in cases No. 1, No. 4, No. 6 and No. 7.

In 1914, Winn in the Panama Canal Zone, and

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

Willits in the Philippines, stated that very good results had been obtained with the use of neosalvarsan and salvarsan in both acute dysenteries and carriers. Since then occasional reports have appeared on the use of these drugs, or allied products such as arsenobenzol, in the treatment of dysentery. Some have suggested their use where emetin-resistant strains of amebae were encountered.

Since the publication of these articles, I have used neosalvarsan and emetin combined in a number of cases of Entameba histolytica infections, with apparently far more satisfactory results than were obtained with the use of emetin alone or by other methods.

In a series of cases an attempt was made to determine definitely whether or not it was possible with the use of emetin and neosalvarsan, salvarsan, or novarsenobenzol, to effect a radical cure, by which I mean a disappearance from the stool of motile amebae and cysts, the stool remaining clear on repeated examinations over a period of at least two months. Ordinarily cysts or motile amebae can be demonstrated in the stool within two weeks in cases where they have disappeared temporarily on account of treatment. Occasionally this time may be exceeded, and the most careful and prolonged search will be negative up to thirty days, rarely longer.

In Case 2 of this series the stool was negative on the 36th day, but only one cover-slip preparation was examined, which is sufficient for practical purposes but which is not enough of an examination to give absolute data. In practically all the examinations made in this series, amebae and cysts were found on the first cover-slip examination, if found at all; but in most of the cases several cover-slip preparations were examined before pronouncing the specimen negative. The stools, usually liquid as a result of salts, were examined practically immediately after passage, thermos bottles being used to keep them warm when transported. Several patients who left shortly after the conclusion of treatment have remained well, according to reports, but these are not included on account of lack of absolute data. Several other cases are at present under treatment, but sufficient time has not elapsed to include them.

The salvarsan, neosalvarsan and novarsenobenzol were used intravenously, and the preparation of emetin was the hydrochloride, in tablets or ampules, manufactured by Burroughs & Wellcome, and was given hypodermically.

In all of the acute cases noted, entire recovery from all symptoms resulted; in most of the chronic cases recovery from symptoms was complete or partial.

In nine of the 21 cases herein reported the disease was contracted in California. In most of the rest it originated in the Philippines, Guam, Java, Mexico, Central or South America.

Case 1. Acute type, originating in California. Two and one-half years ago received a desultory course of emetin treatment over a period of about one month, being given about 17 injections, totaling 10 grains. All symptoms were relieved and the stool was free from amebae a few days after the end of treatment. Six months later symptoms recurred and he was given 2/3 grain of emetin hydrochloride three or four times weekly over a period of four months, about 54 injections with a total of about 36 grains of the drug. After remaining well for about seven months, symptoms again recurred. The patient then administered the drug to himself and took about 84 injections of 2/3 grains each, a total of 56 grains, over a period of about seven months. Two and one-half months later a mild recurrence of symptoms brought the patient under my observation. Up to that time he had received about 155 injections, representing about 102 grains of emetin hydrochloride, the preparations used being either the tablets or ampules of Burroughs & Wellcome. The patient was then given emetin hydrochloride Gr. 1 daily for ten days, followed by neosalvarsan 0.6 Gm. and supplemented by 4 grains of emetin during the next eight days, a total of 14 grains of emetin and 0.6 Gm. neosalvarsan during this course.

Four days after cessation of treatment, actively motile amebae were present in the stool.

Four days later salvarsan 0.4 Gm. was given, and two days later the stool was negative for amebae or cysts.

Seven days after the administration of salvarsan actively motile amebae were again present in the stool.

Emetin treatment was again instituted and given for 13 consecutive days in 1 grain doses, followed by salvarsan 0.6 Gm. and supplemented by three days of 1 grain each of emetin, a total of 16 grains of emetin and salvarsan 0.6 Gm.

During this course the stool contained motile amebae and cysts after the fifth day of emetin, and was negative for motile amebae or cysts after the ninth grain of emetin. There was considerable muscular weakness, especially in the lower extremities, during the administration of the emetin, which passed off entirely within a month of its discontinuance.

The subsequent history of the patient is as follows: Health perfect. Stool examinations negative for amebae or cysts on the 5th, 10th, 16th, 23rd, 28th, 35th, 45th, 64th, 110th, 208th, 388th and 418th day after treatment was stopped.

Case 2. Chronic type, 13 years' duration, originating in Philippine Islands.

In this case an attempt was first made to eradicate the amebae with neosalvarsan alone. Four months prior to this the patient had received emetin hydrochloride as a therapeutic test, being given 3⅓ grains over a period of seven days.

Twenty-four hours after the administration of the first 0.6 Gm. neosalvarsan the stool was free from motile amebae but contained cysts.

On the ninth day motile amebae and cysts were present.

On the tenth day neosalvarsan 0.9 Gm. was given.

The stool was negative for amebae and cysts on the second and fifth day after this injection, and on the eighth day neosalvarsan 0.9 Gm. was repeated.

On the fourth and eleventh days after the last injection cysts were demonstrable in the stools, and on the fifteenth day motile amebae were present.

Emetin hydrochloride and neosalvarsan were then administered, 19 grains of emetin and two doses of neosalvarsan (0.9 Gm. each) being given over a period of 23 days.

Following treatment the stool examination showed no amebae or cysts on the twelfth day, cysts on the twentieth day, and motile amebae on the twenty-fifth day.

Treatment was immediately resumed, emetin hy-

drochloride Gr. 1 being given for eleven consecutive days, followed by salvarsan 0.6 Gm. and one more dose of emetin Gr. 1 the next day, a total of 12 grains of emetin hydrochloride and 0.6 Gm. salvarsan.

During this course of treatment the stool was negative for amebae or cysts on the seventh day, that being the only stool examination made.

Following this course the stool was negative for amebae or cysts on the eighth day and contained motile amebae and cysts on the twelfth day.

Treatment was immediately resumed, salol coated ipecac Gr. 10, 30, 45 and 20, respectively, being given on four consecutive days.

Following this treatment the stool showed no amebae or cysts on the 8th, 14th, 22nd and 36th days. On the 56th day amebae and cysts were present.

Treatment was immediately resumed, beginning with neosalvarsan 0.6 Gm., followed by emetin Gr. 1 daily for four days, then a second neosalvarsan 0.6 Gm., followed by emetin Gr. ½ daily for four days, and ending with a third neosalvarsan 0.6 Gm., a total of 6 grains of emetin and three doses of neosalvarsan, 0.6 Gm. each, during this course.

On the seventh day following, the stool was free of amebae or cysts, on the twentieth day cysts were present, and on the forty-eighth day motile amebae and cysts were demonstrated.

Treatment was soon resumed, and during a course of twenty days, 8 grains of emetin hydrochloride and 4 neosalvarsans (0.6 Gm. each) were given.

A month and a half later, when the stool was next examined, motile amebae were present.

A few weeks later a course of emetin bismuth iodide in keratin coated tablets was given, three 1-grain tablets being administered daily for fourteen consecutive days.

Twenty-eight days later the stool contained motile amebae.

A second attempt to administer this drug had to be abandoned after a few days on account of the severe vomiting produced.

No disagreeable symptoms resulted from the first course, when neosalvarsan alone was used. During the period when the courses of 19 grains and 12 grains of emetin were used and after the ipecac treatment, very severe prostration and marked muscular weakness were evident. Following the last 6-grain course of emetin there was no discomfort.

At present the general condition is excellent, much better than it was prior to the beginning of the first treatment.

Most of the treatment was carried on at the office, the patient being in the hospital during the course of emetin bismuth iodide.

This case has proved to be the most intractable to this method of treatment that I have thus far encountered, and had my observations been limited to it, the method doubtless would have been discarded.

Case 3. Acute type, originating in Central America. Four months pregnant. Eight to ten bowel movements daily; tormina and tenesmus; blood and mucus discharges.

Emetin hydrochloride in ⅓ or ½ grain doses was given daily for eleven days, during which time considerable amelioration of symptoms resulted. After an intermission of four days the dose was increased to ⅔ or 1 grain daily for fifteen days, a total of 14½ grains being given over a period of thirty days. During the height of the treatment there was slight dizziness, considerable muscular weakness in the lower extremities, and increased pulse rate.

The stool showed motile amebae after the administration of 4 grains of emetin, cysts after 9½ grains had been taken, and was free of cysts two days after the end of the course, three cover-slip preparations being examined. Eighteen days after the end of treatment cysts were demonstrated in the stool, and eight days later (twenty-six days after the termination of the emetin treatment) motile amebae were present in the stool. The patient's condition was very good.

Treatment was resumed, Gr. 1 emetin being given daily for nine days, followed by neosalvarsan 0.6 Gm.

The subsequent history is as follows: Health perfect. A normal full-term delivery. Stool examinations were negative for amebae or cysts on the 20th, 32nd, 49th, 85th and 196th day after stopping treatment.

Case 4. Chronic type, originating in California. Intermittent diarrhea and digestive disturbances.

Emetin hydrochloride was given daily for 17 days in 1-grain doses, a total of 17 grains, and two days later 0.4 Gm. salvarsan.

Motile amebae and cysts were present in the stool all through the emetin treatment, being demonstrated on the 6th, 10th and 15th day, and on the morning that the salvarsan was given.

The day following administration of salvarsan the examination of the stool was negative for amebae or cysts.

There was considerable muscular weakness in the lower extremities during the latter part of the treatment, which gradually cleared up and was practically gone within three weeks.

The subsequent history is as follows: Health greatly improved. All symptoms relieved except slight flatulence occasionally. Stool exaimnations were negative for amebae or cysts on the 1st, 5th, 9th, 12th, 26th, 35th, 49th and 61st day after discontinuance of treatment.

Case 5. Chronic type with constipation, originating in California.

Emetin hydrochloride was given Gr. 1 daily for seven days, followed by 20 grains of ipecac (salol coated) daily for two days.

Two doses of neosalvarsan 0.6 Gm. were given, one after the fourth dose of emetin and one the day following the last ipecac treatment.

The stool was negative for amebae or cysts at the end of the emetin treatment. There was very little prostration and muscular weakness resulting from the treatment, and the symptoms were practically all cleared up shortly afterward.

The subsequent history is as follows: Health greatly improved. The examinations of the stools were negative for amebae or cysts on the 15th, 22nd, 36th, 50th, 86th and 166th day after the termination of treatment.

Case 6. Subacute variety, originating in South America.

Emetin hydrochloride was given in 1-grain doses for eleven consecutive days, and on the following day 0.45 Gm. neosalvarsan was administered.

Following the treatment there was considerable muscular weakness, especially in the lower extremities, which lasted for several weeks.

Amebae were still present in the stool after the seventh and tenth doses of emetin had been given.

The subsequent history is as follows: Improvement was slow but definite, although recurrence resulted as noted below. Stool examinations were negative for amebae or cysts on the 6th and 12th days. Cysts were demonstrated on the 18th day. The stools were negative for amebae or cysts on four subsequent examinations, made on the 24th, 32nd, 45th and 107th day. On the 143rd day motile amebae and cysts were again present.

Case 7. Chronic type. Origin unknown.

Emetin hydrochloride in 1-grain doses was given daily for five days, when neosalvarsan 0.45 Gm. was administered followed by emetin for seven days, during which time 5 grains were given, a total of 10 grains of emetin.

On the day neosalvarsan was administered, when

5 grains of emetin had been taken, amebae and cysts were present in the stool.

Three days later the stool was negative for amebae or cysts. Very slight muscular weakness could be ascribed to the treatment.

Subsequent history: No improvement in patient's condition. Marked neurasthenia present. The stool examinations were negative for amebae or cysts on the 3rd, 10th, 20th, 31st, 55th, 80th, 101st, 128th and 252nd day after the last treatment.

Case 8. Subacute type, originating in California.

The patient received in all, over a period of two weeks, 9 grains of emetin, two neosalvarsan 0.6 Gm., and 30 grains of ipecac, salol coated. The treatment was well borne and produced very little prostration. Most of the symptoms were relieved during the course.

Subsequent history: Health greatly improved. Stool examinations negative for amebae or cysts on the 3rd, 12th, 19th, 26th, 39th, 53rd and 97th days after last treatment.

Case 9. Subacute type, originating in California.

During a period of eleven days the patient took in all 8 grains of emetin, one dose of 25 grains of ipecac, and two doses of neosalvarsan (0.6 Gm. each).

The treatment was well tolerated, only slight muscular weakness being complained of.

The subsequent history is as follows: General health good; practically all symptoms relieved. The stool examinations were negative for amebae or cysts on the 8th, 15th, 28th, 38th, 47th, 61st, 92d and 177th days after the end of treatment.

Case 10. Chronic type, originating in Central America. Child of 15.

Emetin hydrochloride Gr. 1/3 was given daily for four days, then Gr. 1/6 daily for six days. Alcresta ipecac tablets Gr. V were also used after the 8th day, two tablets being given twice daily for six days. The total amount of emetin given was 2 1/3 grains in ten days and 24 tablets of alcresta ipecac, the equivalent, as claimed by its manufacturers, of 240 grains of ipecac.

During this treatment motile amebae were always demonstrable in the stools.

Emetin hydrochloride was then given in doses of 2/3 grains daily for three days, with neosalvarson 0.6 Gm. on the fourth day, and emetin 2/3 grains daily again for six more days, followed by a second dose of neosalvarsan 0.6 Gm.

During this second course of treatment 6 grains of emetin and two injections of neosalvarsan, 0.6 Gm. each, were administered over a period of eleven days. Practically no discomfort resulted from the treatment.

The stool was negative for amebae or cysts the day after the first neosalvarsan was given.

The subsequent history is as follows: Health improved. The stool examinations were negative for amebae or cysts on the 2d, 13th, 20th, 30th, 44th and 89th days after termination of treatment.

Case 11. Subacute type, originating in California.

Received 9½ grains of emetin hydrochloride during ten days, followed by two days of ipecac Grs. 10 and 20 respectively.

At the end of treatment, and three days later, the stool was negative for amebae or cysts. On the fourth day after treatment amebae and cysts were demonstrated.

Alcresta ipecac tablets were then given: 3 on the first day, 9 on the second, 9 on the third, 6 on the fourth, and 3 tablets on the fifth day; a total of 30 tablets or, as claimed by the manufacturers, the equivalent of 300 grains of ipecac. The alcresta tablets had to be discontinued on account of the diarrhea, with tormina and tenesmus, which resulted.

Motile amebae were demonstrated in the stool on the 3d and on the last day of taking this preparation.

Emetin hydrochloride was then given in 1 grain doses daily for eight days, with neosalvarsan 0.6 Gm. on the second day while receiving emetin, and again on the day following the last emetin injection.

All symptoms were relieved within two or three days of beginning this last course of treatment. There was considerable muscular weakness resulting, lasting for several weeks.

The subsequent history is as follows: Considerable improvement in health. The stool was negative for amebae or cysts on the 14th, 23d, 25th, 50th, 77th, 79th, 161st and 341st days after treatment.

Case 12. Chronic type, originating in Mexico.

Two years and a half ago was given emetin hydrochloride Gr. 1/3 daily for seven days, then Gr. 1/3 every other day for ten days, a total of 4 grains during a period of seventeen days.

In the middle of this course, material obtained during a sigmoidoscopic examination was negative for amebae.

The patient was lost sight of for a year, and on returning with recurrence, was two months pregnant.

Emetin hydrochloride was given daily in 1 grain doses for three days, then neosalvarsan 0.6 Gm., then emetin Gr. 1 daily for two days, and Gr. 1/2 for two more days, concluding with a second dose of neosalvarsan 0.6 Gm. on the following day; a total of 6 grains of emetin and two 0.6 Gm. doses of neosalvarsan during this course.

Great improvement in the general condition resulted from the treatment, and practically no prostration.

No re-examination of the stool was made until the 27th day after the termination of treatment, when motile amebae and cysts were demonstrated.

Treatment was resumed, and during a period of five days, 5½ grains of emetin hydrochloride and one neosalvarsan 0.6 Gm. were given.

Forty-four days later (the next examination made) amebae were present in the stool. Later on, when pregnancy was well advanced, a mild recurrence of symptoms was controlled by a course of emetin hydrochloride. Pregnancy went to full term with normal delivery. A few months later mild dysenteric symptoms recurred, and treatment is about to be resumed.

Case 13. Chronic type.

During a period of twelve days was given emetin hydrochloride Grs. 12 and 1 neosalvarsan 0.6 Gm.

The stools were negative for amebae or cysts on the 10th, 30th, 57th, 89th and 200th days after termination of treatment.

Case 14. Chronic type, originating in California.

During the course of ten days, 8 grains of emetin hydrochloride and 1 neosalvarsan 0.6 Gm. were given.

Great improvement in the patient's condition resulted and the stool was negative for amebae or cysts on six examinations extending over a period of 105 days.

Case 15. Chronic type, contracted in the Philippine Islands 13 years ago.

During a period of 14 days, 9 grains of emetin hydrochloride and 2 neosalvarsan (0.6 Gm. each) were given.

Very little improvement in the patient's condition resulted. Achylia gastrica was present.

The stools were negative for amebae or cysts on the 2d, 7th, 17th, 51st, 63d, 92d, 119th and 159th days following termination of treatment.

Case 16. Chronic type, contracted in California.

During a course of 14 days, emetin hydrochloride Grs. 12, and 1 neosalvarsan 0.4 Gm., and 1 novarsenobenzol 0.6 Gm. were given.

Great improvement in condition resulted. The stools were negative for amebae or cysts on four examinations over a period of sixty days.

Case 17. Chronic type, contracted in California.

During a course of treatment lasting twelve days, 10 grains of emetin hydrochloride and 2 doses of novarsenobenzol (0.6 Gm. each) were given.

Marked improvement in condition resulted, and the stools were negative on four re-examinations over a period of sixty days.

Case 18. Chronic type, contracted in Java.

During fifteen days' treatment, 11½ grains of emetin hydrochloride and 1 neosalvarsan, 0.6 Gm., were given.

The stools were negative on seven re-examinations over a period of eighty days.

Case 19. Chronic type, contracted in Central America.

During a period of fourteen days, 7 grains of emetin hydrochloride and 2 doses of novarsenobenzol (0.5 Gm. each) were given.

The stool was negative on four re-examinations over a period of sixty days.

Case 20. Chronic type, contracted in Philippines 10 years ago.

During a 12 days' course, emetin hydrochloride Grs. 11 and 1 neosalvarsan 0.6 Gm. were given.

The stool showed amebae 11 days later.

Twenty-three days after the termination of the first course of treatment a second course was given, which lasted 13 days, during which 9 grains of emetin hydrochloride and 1 novarsenobenzol 0.6 Gm. and 1 neosalvarsan 0.6 Gm. were given.

On the tenth day following the end of treatment the stool was negative for amebae or cysts.

On the 19th and 31st days cysts were present. At the next examination, two months later, motile amebae and cysts were demonstrated.

Case 21. Chronic type, contracted in Guam.

The patient, a girl five years of age, was given 3 grains of emetin hydrochloride and 1 novarsenobenzol 0.2 Gm. during a period of thirteen days.

Only three re-examinations have been made over a period of sixty days, all being negative.

SUMMARY.

Results of Combined Treatment.

Case No.	Duration of treatment. No. days.	Total amt. drugs used during course of treatment. Emetin hydrochloride, grains.	Neosalvarsan, gms.	Salvarsan, gms.	Novarsenobenzol, gms.	Stool examinations subsequent to treatment. No.	Extending over No. days.	Results	Remarks
1	19	14	0.6						
	17	16		0.6		12	418	—	
2	23	19	1.8						
	13	12		0.6					
	11	6	1.8						
	20	8	2.4					Uncured	
3	10	9	0.6			5	196		4 mos. pregnant
4	19	17		0.4		8	61		
5	11	7	1.2			6	166		
6	12	11	0.45					Uncured	
7	13	10	0.45			9	252		
8	14	9	1.2			7	97		
9	11	8	1.2			8	177		
10	11	6	1.2			6	89		15 yrs. age
11	10	8	1.2			8	341		
12	9	6	1.2					Uncured	Pregnant
	5	5½	0.6						
13	12	12	0.6			5	200		
14	10	8	0.6			6	105		
15	14	9	1.2			8	159		
16	14	12	0.4		0.6	4	60		
17	12	10			1.2	4	60		
18	15	11½	0.6			7	80		
19	14	7			1.0	4	60		
20	12	11	0.6						
	13	9	0.6		0.6			Uncured	
21	13	3			0.2	3	60		5 yrs. age

Note:—All cured except those marked uncured.

Total number of cases treated..... 21
Total number of cases cured..... 17
Percentage of cures..... 80

If cases Nos. 6, 12 and 20, which have received only one or two courses of combined emetin and arsenic treatment, are omitted from these figures as incompletely treated, it would materially alter the percentage of cures shown:

Total number of cases treated (to completion) 18
Total number of cases cured..... 17
Percentage of cures..... 94

Number of cases cured in one course of emetin and arsenic treatment..... 16
Number of cases cured in two courses of emetin and arsenic treatment..... 1

Total cured..... 17

Number of cases uncured after 1 course of treatment..... 1
Number of cases uncured after 2 courses of treatment..... 2
Number of cases uncured after 4 courses of treatment..... 1

Total uncured..... 4

Average duration of course of treatment.. 13 days
Average number stools re-examined after treatment..... 6.5
Average time under observation after treatment.....151 days

At the present time I am using less emetin and more neosalvarsan; the emetin is discontinued if symptoms of muscular weakness supervene, and even if well tolerated not over 10 grains are given in a course; the neosalvarsan is administered after four or five doses of emetin have been given and is repeated at or near the end of the emetin course. Following the treatment the stool is carefully examined at regular intervals, and immediately upon the reappearance of cysts or amebae the course of treatment is repeated.

No ill effects from the use of neosalvarsan or novarsenobenzol have been observed in any case, and the results following their use seem to be as good as with salvarsan, which produced a much greater reaction.

CONCLUSIONS.

It would appear from my observations that a radical cure of amebiasis can be effected but rarely with emetin hydrochloride alone, which is the consensus of opinion at the present time. From a very limited number of observations, the same would seem to be the case with salvarsan and neosalvarsan used alone.

The combined use of emetin hydrochloride and salvarsan, neosalvarsan, or novarsenobenzol may be expected to produce a radical cure in a large proportion of cases if the arsenic compound is injected while the patient is well under the influence of the emetin. The treatment as carried out by this method is far more rapid, less severe, and apparently much more efficacious than with most of the old methods of treatment.

240 Stockton Street.

ACUTE GASTRO-DUODENAL PERFORATIONS.

By EDMUND BUTLER, M. D., San Francisco.

(Continued from April Journal 1918.)

The early cases do not always require drainage. It is safer to use a soft rubber tube reaching into the right kidney pouch or the left subphrenic space.

As a rule, subphrenic abscesses are the complication of chronic perforating ulcers or of cases of acute perforation which have been followed by a diffuse suppurative peritonitis. In cases of well advanced peritonitis, suprapubic drainage is indicated. In closing the abdominal wall, plain catgut in the peritoneum and figure-of-eight sutures of silk worm catgut, including the fascia, fat and skin are most often used.

The after treatment is simple. Fowler position, Murphy proctoclysis, with 5 per cent. solution of glucose and 5 per cent. solution of bicarbonate of soda, by the Weeks method, is continued for three days. Small quantities of water are given by mouth every hour. Heroin Gr. 1/24 hypodermically is given every three hours, if necessary, to comfort the patient.

Tea, broth, fruit juice, peptonized milk and malted milk, are given after the fourth or fifth day, and after two weeks, treat as an uncomplicated ulcer case. Will Mayo states that "ulcer cases that have been operated upon require regulation of diet for a long time following the operation."

Is a gastroenterostomy indicated? If, after the ulcer is closed, there is apparent obstruction and the patient is in condition to stand the added operative procedure, it should be done, but as a rule it is not necessary. Eliot states, in his article in the American Journal of Surgery, 1908, that "the increase in mortality, if routine gastrojejunostomy is done, is greater than the number of cases that will ultimately require gastrojejunostomy." "Perforations without previous history of indigeston get along better without gastrojejunostomy," Will Mayo states.

Moynihan maintains, "in the first place, all cases where the ulcer is placed at or near the pylorus, in a position where the subsequent contraction in healing is likely to cause stenosis, gastrojejunostomy should be done. In the second place, when placed near the lesser curvature or away from the pylorus, excision or infolding is sufficient to give complete relief."

Eliot later states, "after consultation of all accessible published autopsy records, I find that not a fatality has been found which could in any way be ascribed to the omission of a gastroenterostomy."

Lockwood, in his book "Diseases of the Stomach," says that "most perforations are in acute ulcers and heal readily without gastroenterostomy."

I greatly appreciate the opportunity which has been extended to me by Dr. Alanson Weeks, the former Chief Surgeon, and Dr. Saxton Pope, the present Chief Surgeon of the San Francisco Municipal Emergency Hospitals, of having operated upon the following cases of ruptured duodenal and gastric ulcers:

Case 1. J. L., age 24, male; occupation, stevedore; March 31, 1916, 3:55 p. m.

Present Trouble.—Has been drinking heavily for fourteen days. Last ten days, gnawing pains in epigastric region. Had a sudden pain in epigastric region at 6 p. m. yesterday. The pain has been continuous since, and generalized over the entire abdomen during the last twelve hours. Vomited; no blood in vomitus. Bowels moved this morning.

Examination.—Pulse 104, temperature 101. White blood count 18,000. Abdomen slightly distended. Generalized tenderness. Greatest tenderness in epigastric region and along ascending colon. Moderate degree of general rigidity. Peristalsis present.

Diagnosis.—Ruptured gastric ulcer.

Operation.—Five p. m. Ether anesthetic. Right rectus epigastric incision. Liver greatly enlarged. Considerable amount of free, turbid fluid. Many flakes of fibrin. Perforation in anterior stomach wall, near the pylorus. Stomach wall shows marked inflammatory changes in region of ulcer. Perforation closed with double row of catgut sutures. Tag of omentum tacked over suture line. Tube drain down to right subphrenic space.

Result.—Recovery.

Case 2. W. K., age 30, male; occupation, stevedore; April 27, 1917, 12:20 a. m.

Present Trouble.—Seized with sudden pain in region of epigastrium while straining at stool at 8:00 p. m. on April 26, 1917. Vomitted one hour later. Pain is beginning to be diffuse. No indigestion.

Examination.—Patient suffering great pain. Thoracic respiration. Abdomen retracted, rigid and board-like. Greatest tenderness in right upper quadrant. Pulse, 72; temperature, 99.

Diagnosis.—Ruptured gastric ulcer.

Operation.—One forty a. m. Middle epigastric incision. Moderate amount of bile-tinged fluid, containing fibrin flakes, found. Small perforation anterior surface of distal part of first segment of duodenum, about the size of a white bean. Slight amount of induration around perforation. Perforation closed with double row of catgut sutures. Omentum tacked over suture line. Rubber tube drain inserted to right kidney pouch.

Result.—Recovery.

Case 3. V. B., age 40, male; occupation, tailor; September 4, 1917, 6:20 p. m.

Present Trouble.—Was taken with a severe pain in the pit of the stomach, about 4 p. m. Pain continuous since. Hot water, whiskey and bitters did not relieve pain. Vomiting followed the above medication. Had a somewhat similar attack three years ago, when he was confined to his bed four days. Patient has had indigestion for some time.

Examination.—Thighs flexed. Abdomen tense—board-like. Marked tenderness in epigastric region. No tenderness over appendix. Breathing thoracic in type. Pupils equal and react. Pulse, 68; temperature, 98; blood count, 21,600.

Diagnosis.—Probable ruptured gastric ulcer.

Operation.—Eight forty-five p. m. Epigastric, midline incision. Small amount of gas and stomach contents found in upper abdomen. Perforated ulcer size of lead pencil anterior wall of the stomach, one centimeter from the pylorus. Perforation closed with purse-string suture of catgut, reinforced with several Lembert sutures of catgut. Tube drain down to right subphrenic space.

Result.—Recovery.

Case 4. W. S., age 42, male; occupation, unknown; February 28, 1915, 4:30 p. m.

Present Trouble.—Has been having slight pain in epigastric region for five or six days. Seized with sudden pain, which doubled patient up, at

8 a. m. today. Similar attaek eleven years ago. No history of pain after meals. No vomiting of blood. No tarry stools. Vomited bile. No history of jaundice.

Examination.—Entire abdomen tender and rigid, and slightly distended. Pulse, 110; temperature, 99 (reetal); blood count, 6200.

Diagnosis.—Perforated gastrie ulcer.

Operation.—Nine p. m. Midline epigastrie incision. Abdomen found to eontain great amounts of bile-tinged, mucilaginous, flaky fluid. Duodenum adherent to inferior surfaee of the liver. Adhesions separated and perforation the size of the little finger, with bile pouring from it, came into view. Perforation closed with double row of interrupted catgut sutures. Omentum tacked over suture line. Drainage, suprapubic and both groins.

Result.—Died March 2, 1915, at 12 p. m.

Case 5. R. F., age 50, male; oecupation, unknown; August 20, 1915, 3 p. m.

Present Trouble.—Dull, aching pain over upper part of abdomen. Constipated. Bowels have not moved for two days. Pain began last evening, August 19th, about 7 p. m. Pain is not sharp. Patient has had stomaeh trouble for some time. Vomited this afternoon.

Examination.—Patient sober. Abdomen distended and tense. General rigidity. Pain on pressure over all parts of the abdomen, but most marked over the gastric region. Face pale and drawn. Pulse, 130; temperature 98 (F.).

Diagnosis.—Intestinal perforations.

Operation.—Five p. m., August 20, 1917. Midline epigastrie incision. Preperitoneal fat found to be edematous. On opening peritoneum, considerable quantity of gas escaped. Peritoneal cavity filled with bile-stained, mucilaginous fluid. Anterior surface of stomach and surface of intestines eovered with fibrin. Perforation the size of a red bean found in the first portion of the duodenum. Omentum and fat in the region of the perforation studded with small, white areas of panereatic digestion. Perforation closed with double row of eatgut sutures. Suprapubie drainage, and drainage through wound.

Result.—Died August 21, 1915, at 7 a. m.

Case 6. L. C., age 55, male; oecupation, carpenter; July 5, 1917, 8 p. m.

Present Trouble.—About three hours ago was seized with sudden pain in the pit of the stomach. Pain similar to this one ycar ago, the attack lasting one week. Abdomen was tender for four months following the attack. Vomited. Pain at present extends across the upper abdomen. Has had distress after meals for months.

Examination.—Upper abdomen rigid, tender, board-like and retracted. Costal type of breathing. Pulse, 88; temperature, 100.2; blood eount, 24,800.

Diagnosis.—Perforated gastrie ulcer.

Operation.—Nine p. m.; midline epigastric incision. Small amount of free fluid found; also large, indurated mass, about the size of a doughnut, in the region of the first portion of the duodenum and pylorus (possibly malignant). Corresponding to center of doughnut, perforation the size of the index finger. Pylorus apparently completely eonstricted by the mass and sutures. Posterior gastrojejunostomy done. Drainage inserted to right kidney poueh.

Result.—Recovery.

Discussion.

Dr. Saxton Pope: The Emergency Hospital has had a good opportunity to collect these cases. We have 18 reeorded. The work was done by Dr. Weeks, Dr. Harrison and Dr. Butler. We are somewhat favored, because the patient is taken with severe pain and is rushed to us as rapidly as possible. Dr. Butler has reported six of these. In the other 12 cases there has been a mortality of about 25 per eent. Apparently this mortality has been in direct proportion to the time that has elapsed between perforation and the time of operation. The diagnosis of this eondition is getting to be a eommon oeeurrenee at the Emergeney Hospital and we are ever on the lookout for it. The doetor who has not an emergeney training, and who sees few of these eases, is apt to waste time in making a diagnosis. At the Emergency Hospital there is no time for the finer technicalities, but we are very aeute on clinieal phenomena.

The majority of these perforations oeeur near the pylorus. One I happened to have reeently, was an immense ulcer whieh perforated near the eardia. This man had tabes dorsalis as well, and it was a niee question in diagnostics—whether we were dealing with a crisis or a perforation.

Dr. Butler quoted Dr. Deaver as saying that 90 per cent. of all perforations die if not treated surgically. This ean hardly be accurate, because we all see cases that have come to operation later, where either the perforation is closed by massive adhesions, or a condition described by C. M. Cooper as pseudo-tubereulous peritonitis, or foreign body peritonitis exists, showing that a patient may survive a perforation. You will notice that of the cases reported, three of the men had attacks before.

I have seen only five eases of acute perforation ulcers, but two of these five died. That again was a matter of time. One woman was held three days before the diagnosis was made. The other, a man, was so full of barium sulphate from the X-ray that I imagined his recovery was unfavorably influeneed by this substanee. Two of my cases I washed out. It seems to me that if a man has onions, beans and barium floating around in his stomaeh it is a good thing to wash him out; otherwise a forcign body peritonitis is more apt to supervene.

Dr. Butler is to be congratulated. I do not think many surgeons as young as he, have had even six cases of perforating gastrie and duodenal ulcers.

Dr. J. Rosenstirn: There is little to add to what the two previous speakers have remarked. We see in Mount Zion Hospital quite a number of perforated uleers. The bulk of the material we have there is not very stoical; they are very apt to resent pain and they are brought to the hospital early. I think I can safely say I have twelve or fifteen eases that have reeovered amongst perhaps twenty-five, I believe, that I have operated upon myself. One of the two fatal cases of Dr. Butler's showed low resistanee, with a leucocyte count of only 62.00, the other showed a pulse of 130 with a temperature of 98, also indicative of low resistance and shock; so this serves to explain the bad results.

I also differ from Dr. Butler in his general eondemnation of lavage. If there has been an eseape of stomach or intestinal eontents into the abdomen, I try to wall off the soiled parts as much as possible and wash out the abdominal eavity. I believe a warm saline solution, introduced gently into the abdominal cavity and led off by good sized drainage tubes, is not injurious.

My statistics are not as favorable as these, probably because they partly date from an earlier period, when the technie was not so good as in recent years, and I eongratulate Dr. Butler that in his first efforts in this rather difficult field of operation, he has had such good results.

Dr. Butler, closing diseussion: In a ruptured gastrie or duodenal uleer that had gone ten hours, you would have shock. In the first three or four hours, when there is a good ehance for the man's rceovery, there is no shoek. If you have shock, the man is so mueh worse off. The fourth and fifth cases were in shock, which you would hardly be able to differentiate from acute surgieal shock.

THE CONTROL OF EPIDEMIC MENINGITIS, WITH SOME OBSERVATIONS MADE DURING AN EPIDEMIC AT THE UNITED STATES NAVAL TRAINING STATION, SAN DIEGO, CALIFORNIA.*

By FRANK L. KELLY, M. D., Gr. P. H.
Epidemiologist, California State Board of Health, Berkeley, California.

Before taking up the methods for the control of meningitis, it will be advisable to consider the various types of the disease. The division into sporadic and epidemic meningitis may be arbitrary and does not mean that the two are different clinically, for the epidemics of the disease very probably arise from the sporadic cases. For this reason the terms endemic and epidemic may more correctly express the difference. However, the distinction is of practical value in designating the forms of the disease to which different methods of control are adaptable.

The disease may vary in intensity from the abortive to the fulminating type in which death may ensue in 24-48 hours. The diagnosis of the abortive and atypical cases is of the greatest importance in controlling the spread of the disease. Hochhaus [1] reported an epidemic of 32 cases, 16, or 50%, of which were of the abortive type. Several epidemics with a large percentage of atypical cases have been reported in Denmark. Lundie, Thomas, and Fleming,[2] English investigators, state that the disease often goes no further than the catarrhal stage. These cases may show only headache, slight or no meningeal irritation, and slight rise in pulse rate and temperature, all of which may clear up in 24-48 hours. Cuplin [3] states that practically all of the abortive cases, if watched carefully, show some lowering of the pulse rate with slight dizziness or other symptom of meningeal involvement some time within two to seven days after the onset. These symptoms may come on after all others have cleared up and the patient feels perfectly well. A case of this type was seen by Assistant Surgeon Searles and myself on the U. S. S. San Diego. This man, a Filipino, had a severe headache, a slight rise in temperature, a slight increase in pulse rate, and markedly positive Kernig's and Brudzinski's signs. Doctor Searles and I felt that the case was one of meningitis and sent the man to the isolation hospital. The next morning the physician in charge of the patient informed me that the man seemed perfectly normal and that he had not felt justified in doing a lumbar puncture. However, the patient was kept in the hospital and several days later it appeared as if the disease was again going to develop. This condition soon cleared up and there was no further trouble.

Lundie, Thomas, and Fleming [2] hold that there are always three stages to the disease, the catarrhal, septicemic, and meningeal. Many observers do not agree that the disease always begins as a catarrhal inflammation of the naso-pharynx.

It must be remembered that in a very high percentage of cases the meningococcus is not demonstrable in the naso-pharyngeal secretions or in the spinal fluid. Halahan [4] reported a series of 19 cases, 13 of which gave repeated negative spinal fluids. However, it is usually found in one or the other of these locations, and has also been isolated from the blood, urine, and petechial spots in the skin. Of the five localizations, the one of greatest importance from the standpoint of control is the naso-pharynx, for as Fitzgerald [5] says, "The epidemic is one of meningococci in the naso-pharynx and not one of the epi-phenomenon, cerebro-spinal fever."

Since the identification of the meningococcus by Weichselbaum in 1887 there has been a great deal of controversy as to its true relationship to the disease. The evidence that it is the causative agent is conclusive and careful observations have shown that the organisms confused with it have been due to contaminations and faulty technic. Recently, however, Hort, Lakin, and Benians [6] have reported the discovery of a filterable virus in the spinal fluid of meningitic patients, which they feel is in some way concerned with the disease. Their observations so far lack confirmation.

As the meningococcus rapidly dies when outside the human body and requires a special media for its cultivation, it is obvious that it is spread only by direct contact with a person carrying the organism or with some article recently contaminated with fresh secretions from such a person. Flexner [7] states that "The meningococcus enters and leaves the body by way of the secretions of the naso-pharyngeal membrane," and "no other avenue of entrance or exit is known." While this is undoubtedly true in the great majority of cases, the fact that the meningococcus has been found in the urine [6 8] makes it, as well as the naso-pharyngeal secretions, a possible factor in the spread of the disease. This was recognized by Nicholls,[9] who insisted on the disinfection of the urine of all cases and carriers.

Whatever the portal of entry we do know that the organism is found in the naso-pharynx of healthy persons as well as of those ill with the disease. The prevalence of carriers is so extensive that Arkwright [10] says, "the statement that cases of meningitis occur when and where carriers are numerous, is a more correct way of stating facts than by saying that many carriers occur in the neighborhood of cases of meningitis."

The percentages of apparently healthy carriers of meningococci found by different investigators vary almost as much as those of diphtheria carriers.

* Read before the Conference of California Health Officers, Santa Rosa, 1917.

Frost [11] tables the results of 25 investigations by different men showing percentages of positives running from 0.0% to 70%. These results were found in many different groups of persons, the highest, 70%, being obtained by Osterman from 24 persons who were members of families in which there were cases of meningitis. Most observations among persons not in contact with cases of meningitis show about 2% to be carriers. However, by very careful examinations spread over a considerable period of time Eastwood [12] found 10% and Scott [13] 13.7% of patients at the out patient departments of two English hospitals to be meningococcus carriers. None of these persons had, so far as could be ascertained, been in contact with cases of the disease. One group of investigators hold that all carriers show some catarrhal inflammation of the naso-pharynx, but many others have not found this constant. In the investigation of 1583 naval recruits at the San Diego Naval Training Station during an epidemic of meningitis, we found 78 or 4.9% carriers. A large proportion of the positive cultures were obtained from men with no catarrhal inflammation. We found that the hospital corps men who had been in contact with the quarantined carriers gave the highest number of positives, 9.6% of these men proving to be carriers.

The identification of the meningococci found in the naso-pharynx with those found in the cerebrospinal fluid has been established microscopically, culturally, serologically, and by fermentation tests. Eastwood [12] concludes that microscopical, cultural, and fermentation tests are sufficient to identify an organism as a meningococcus and to warrant holding the person harboring it as a carrier. Other investigators place more reliance on agglutination tests.

Normal carriers like normal diphtheria carriers can only be detected by bacteriological examination. This examination is complicated by the presence of many Gram negative diplococci in the naso-pharynx other than meningococci and which closely resemble it culturally. It therefore becomes necessary to plant suspicious colonies on sugar media for fermentation tests and also, if possible, to test them serologically. Krumwiede [14] has recently reported a microscopical slide agglutination test that holds great promise for rapid diagnosis. Our results at San Diego were based on microscopical, cultural, and fermentation reactions as we had no facilities for doing agglutination tests. We found sheep-serum-dextrose-agar to be an excellent medium for primary growth and used sheep-serum-dextrose-agar and acitic-fluid agar and dextrose, maltose, levulose and galactose, with Andradi's indicator for the fermentation reactions.

The period during which meningococci are present in the naso-pharynx of carriers varies greatly, some persons carrying as long as 8 to 9 months. These instances fortunately are rare, the majority of carriers becoming free of the organism within the course of a week or two.

The problem of clearing up the carriers is one of great importance. Many different procedures have been suggested. At San Diego a 2% solution of argyrol was used by means of a post-pharyngeal spray. At the Goat Island Station Minaker [15] used a ¼% solution of iodine in 50% alcohol applied to the naso-pharynx by swabs. Various other solutions have been used such as iodinized glycerine, eucalyptus oil, etc. Dunham and Dakin [16] felt that the use of dichloramine-T as a spray would prove of value. Investigations with the above solutions and many others, as well as treatment with vaccines and insufflations of dried immune serum have shown them all to be of little or no value in shortening the carrier period. A method used by Gordon [17] gives great promise of excellent results. The carriers were placed in a room at a temperature of 77-85° F. in which the air was kept at the saturation point. One litre of a 2% solution of chloramine was sprayed into this room in the course of 15 to 20 minutes by means of a spray which divided it very finely. By this method they were able to clear up carriers with one or two treatments of about 20 minutes each, and plates of staphylococcus exposed to this atmosphere for 10 minutes were completely sterilized. When a 1.2% zinc sulphate solution was used instead of the chloramine the results were not so satisfactory. The same method had been used by Kuster [18] in treating carriers except that he used Sano's fluid, the active principle of which, like chloramine, is a compound of hypochlorous acid.

The conditions which seem to favor the spread of the organism are overcrowding, poor ventilation, high temperature and high saturation of the atmosphere. It is readily seen how under such conditions the organism is more easily transferred from one person to another. Not only is the transfer made more easily but once the organism is implanted on the mucous membrane of the naso-pharynx its growth is assured, as these same conditions tend to local congestion and excessive secretion. After the organism is present in the naso-pharynx the condition of the carrier seems to determine whether or not the infection will become general. Lowered resistance due to fatigue, chilling, etc., or local inflammatory conditions of the mucous membrane seem to play an important part in the development of the disease. That carriers do not develop the disease because of a specific immunity is disproved by the fact that a susceptible individual may have the organism in his naso-pharynx and yet not develop the disease until some months later.

Methods of controlling meningitis may be taken up from two standpoints, the prevention of the spread of the infection and the reduction of mortality among those in whom the infection has developed. The public health authorities can do much to lower the mortality from this disease by providing expert diagnosticians and bacteriologists to assist in diagnosing atypical and abortive cases. Physicians should be made to understand that early diagnosis and early serum treatment are the only ways by which the patient's chance for recovery can be improved. Flexner [7] tables several series of cases treated at different times showing that the mortality in cases treated before the third

day varied from 7.1% to 18.8%, while in cases treated after the seventh day it was from 23.5% to 50%. This shows the absolute necessity of early serum treatment. In the San Diego epidemic of 16 cases there was only one death, a mortality of 6.25%. This low rate was undoubtedly due to the early diagnosis and injection of serum. The only death was that of a patient with the fulminating type of the disease who was picked up unconscious and did not respond to serum treatment.

The prevention of the spread of the infection may be taken up under several headings, first, the improvement of hygienic and sanitary conditions, second, prophylactic inoculation, and third, the detection and control of carriers.

As stated above, overcrowding and poor ventilation are apparently great factors in the spread of the infection and for this reason these conditions should be remedied immediately on the appearance of the disease. If in a military camp, the men should be segregated into small units and encouraged to sleep in the open if possible. It is interesting to note that during the months of June and July, 16 cases of meningitis developed at the San Diego training station, while only 3 appeared at the Goat Island station, the focus of the infection and from where all the men at San Diego had recently come. This was apparently due to the fact that at San Diego the men were housed in poorly ventilated buildings after close association in crowded sleeping cars on the trip down. Besides improving the conditions under which the men live, it is advisable to see that the new recruits, unaccustomed as they usually are to military life, should not be subjected to overfatigue, chilling, etc., until they become hardened.

At San Diego we felt that the breaking of the men into small units and the improvement of the housing conditions, carrying out the recommendations of Senior Surgeon Williams, U. S. P. H. S., and Medical Inspector Baker, U. S. N., had more to do with terminating the epidemic than the bacteriological survey of the men. In fact the epidemic practically ended a week before the survey was started. We do feel, however, that the bacteriological examination was justified in that by detecting and treating the carriers trouble may have been avoided for the future should these same men be put again under adverse conditions.

So far prophylactic inoculation against meningitis has not been particularly promising. It has, however, been used by several investigators, among whom are Sophian and Black,[19] and Chalmers and O'Farrell,[20] who feel that it holds some hope.

As stated before, carriers can only be detected by bacteriological examination and the finding of meningococci in the naso-pharynx. Undoubtedly the ideal method of control would be to exanine all persons in a community in which meningitis had appeared and isolate all carriers until free from the organism. This is obviously impossible outside of an institution, military or industrial camp, and even in such places the value of the procedure is questionable if the disease is at all widespread. In the first place the examination of a large number of persons is necessarily time consuming and unless it can be completed in the course of 5 to 7 days the number of reinfections will be so great as to make the work valueless. After carefully checking the work in the military laboratories in England it has been estimated that in order to examine 100 men daily a force consisting of two bacteriologists specially trained in meningitis with two trained assistants and all of the media supplied from a base depot would be required. Therefore, such a procedure is impracticable in large bodies of men or in a community.

Another method of finding the carriers is to examine all contacts with a case of meningitis. In a community this would consist in the examination of the members of a household in which the disease had appeared. In an institution or camp the examination of persons sleeping in the same room and eating on either side of the patient, and if in a military organization possibly the members in the patient's squad. Even the value of this limited procedure depends on the carrier rate among non-contacts. If this is high then the isolation and control of the contact carriers will have little effect in preventing the spread of the disease. It is possible, however, that the contact carriers, like the pneumococcus contact carriers, may harbor more virulent organisms than the non-contacts, and for this reason their control may be of more importance.

A third compromise procedure followed by Flack[21] in an epidemic in a British military camp consists in the examination of all immediate contacts with a case of the disease, then the examination of all contacts with the positive carriers, and so on, thus rapidly detecting a large number of carriers in a comparatively short space of time. As the time element is of the greatest importance in controlling the spread of the disease this procedure of Flack's gives promise of better results than any other method, and while meningitis was not eradicated at this station the number of cases was greatly reduced and the disease brought under control in a very short time.

Still a fourth procedure that might prove of value in a camp is the systematic examination of the force at a time when the case and carrier rate is low as it usually is during the summer months. This would give more time for a careful search for the carriers and if combined with Flack's procedure should prove very effective.

The only procedure applicable to the civil population is the detection of the contact carriers. In order to control the value of this, examinations should be made of groups of non-contacts, and if the carrier rate runs high among such persons it is useless to try and control the spread of the disease by any known method. This does not mean, however, that persons ill with the disease and carriers should be allowed to spread the infection broadcast. All such individuals should be instructed to destroy or disinfect all nasopharyngeal discharges, should be warned of the danger of coughing and sneezing, and in the case of persons ill with the disease all body discharges should be disinfected.

Regarding the advisability of the wholesale culturing and isolating of carriers, I would like to call your attention to the statements of several investigators. Cleland [22] says, "To sum up the position of affairs from this résumé, I am inclined to consider that measures taken to detect and isolate carriers during an epidemic are little likely to decrease to any recognizable extent the incidence of the disease." Armstrong [23] writes, "If carriers are as numerous among the civil population as these facts seem to indicate, the value of stringent isolation of contacts is evidently much depreciated and it becomes questionable whether health authorities would be warranted in enforcing it as a routine measure in ordinary civil populations." Frost,[11] speaking of the value of quarantine, says, "By complete isolation of all the associates of every recognized case more might perhaps be accomplished; but rigid quarantine is a serious matter, justified only by a reasonable hope of proportionate results; and considering that the most prompt and rigid isolation of all immediate associates of every recognized case would still leave at large a very considerable number of carriers, the rigid quarantine of either houses or communities on account of cerebro-spinal meningitis seems ordinarily unjustified," and "The most recent bacteriologic studies, as well as past experience, indicate that cerebro-spinal meningitis, when once it has become epidemic, is not controllable by any known means of practical application."

Summing up the methods of control we find that they consist, first, in the early diagnosis and treatment of cases in order to lower the mortality, and second, in the prevention of the spread of the infection by cutting down the chances of contact, by improving housing conditions and ventilation, by not inviting the infection through general or local lowering of resistance, by the detection and control of carriers wherever practicable, using in each individual instance the method most suitable under the circumstances, and possible by the use of a prophylactic vaccine.

References.

1. Hochhaus, H.—Deutsch. Med. Wchnschr., 1915, xli, 1185.
2. Lundie, A., et al.—Brit. Med. Jour., i, 1915, 466, 493, 628, 836.
3. Cuplin, M.—Brit. Med. Jour., i, 1916, 307.
4. Halahan, T. D.—Lancet, London, ii, 1916, 1102.
5. Fitzgerald, J. G.—Canad. Med. Assn. Jour., 1916, vi, 695.
6. Hort, E. C., et al.—Brit. Med. Jour., i, 1915, 541, 715, ii, 1916, 522, ii, 1917, 377.
7. Flexner, S.—The Journal A. M. A., 1917, 639, 721.
8. Williams, M. H.—Brit. Med. Jour., i, 1915, 619.
9. Nicholls, A. C.—Canad. Med. Assn. Jour., 1916, vi, 969.
10. Arkwright, A. J.—Brit. Med. Jour., i, 1915, 494.
11. Frost, W. H.—Pub. Health Rep., 1912, xxvii, 97.
12. Eastwood, A.—Jour. Hyg., London, 1915-1916, xv, 405.
13. Scott, W. M.—Jour. Hyg., London, 1915-1916, xv, 464.
14. Krumwiede, Chas., Jr.—The Journal A. M. A., 1917, lix, 358.
15. Minaker, A. J.—Personal communication.
16. Dunham, E. K. and Dakin, H. D.—Brit. Med. Jour. i, 1917, 865.
17. Gordon, M. H.—Brit. Med. Jour., ii, 1916, 8, 673.
18. Küster, E.—Deutsch. Med. Wchnschr., 1915, xli, 1116.
19. Sophian, A. and Black, J.—The Journal A. M. A., 1912, lix, 527.
20. Chalmers, A. J. and O'Farrell, W. R.—Jour. Trop. Med., 1916, xix, 101.
21. Flack, M.—Jour. Roy. Army Med. Corps, London, 1917, xxviii, 113.
22. Cleland, J. B.—Med. Jour. Australia, ii, 1915, 496, 516.
23. Armstrong, W. G.—Med. Jour. Australia, ii, 1916, 492.

THE TREATMENT OF WARTS.

By DOUGLASS W. MONTGOMERY, M. D., San Francisco, and GEORGE D. CULVER, M. D. San Francisco.

Verruca may give rise to infinite annoyance, and may be exasperatingly pertinaceous and recurrent. The situation of the growth is of the greatest importance both in regard to the symptoms evoked, the disability involved and the steps to be taken in treatment.

VERRUCAE OF THE SCALP.

Verruca of the scalp, for instance, because the comb catches in it, continually gives rise to slight hemorrhages, which glue the hairs together disagreeably. The little wounds also facilitate pyogenic infections, which may spread over the scalp, causing alarm because of their extent, and because of the posterior cervical lymphatic enlargements which they may occasion.

Verrucae in this situation are easy to eradicate by the curet. After closely clipping away the hairs over the small area involved, the nose of the curet is firmly pressed against the base of the growth, which readily scrapes off, leaving a freely bleeding surface level with the scalp. The bleeding is easily stopped with trichloracetic acid, made fluid by adding a drop of water to a few crystals in a watch glass. Immediately after applying this acid, care should be taken to sop the surface well with boric acid solution, so as to prevent the trichloracetic acid from acting too deeply.

Another way of removing warts from the scalp is by the high frequency spark. In a very few seconds the verruca is battered down into a gray, greasy mass, which may be pushed off with the nail, leaving a smooth surface. I do not know of warts in any other situation acting like this toward the high frequency spark, and it must be due to the soft epithelial covering, acting as a good conductor. Pusey, for instance, has shown that the action of the high frequency current on warts in other situations may be facilitated by softening the epithelium with liquor potassae. It is not advisable to remove warts from the scalp by either X-rays or radium for fear of causing baldness.

WARTS ON THE EDGE OF THE EYELIDS.

Warts on the edges of the lids had better be taken care of by the oculist. In elderly people, with a seborrhoeic skin, in whom they are most apt to occur, their removal is of importance as they may undergo malignant degeneration.

WARTS ABOUT OR UNDER THE NAILS.

Warts about the nail, because of the depth of the nailfold and the additional depth of the lesions, are deeply countersunk in the tissues. Furthermore, the obstacle of the nail itself, and the tenderness of the region involved, offer special difficulties in treatment. In addition to this, when tampered with, warts in this situation are especially liable to pyogenic infection, frequently implicating the whole extremity. Even spontaneously this infection may occur from the irritation and wounding caused by the edge of the nail. Fear of spreading the infection may also deter from

performing evulsion of the nail, and so clearing the surgical field.

The treatment with radium here shows at its best. It is easy of application. It requires no preliminary treatment or evulsion of the nail, and therefore, gives rise to no additional risk of infection. It does give rise to some reaction, which, for a time, makes the radiated area very tender. After the subsidence of the reaction, however, the lesion can be counted on to disappear.

Warts in the nail folds, and under the free edge of the nails, are sometimes so thickly aggregated as to present a continuous, thickened, dirty-colored, rough surface, which may easily be mistaken for an eczema. Examination with a low power, six diameter pocket lens will dissociate the lesions and clear up the diagnosis.

Under the usual form of treatment this condition is one of the most exasperating. The first measure to be taken is to soften the horny covering, which may be accomplished with a strong salicylic acid ointment (12%), spread on cloth, applied, and covered with a rubber fingerstall. Much may also be done with a watery solution of boric acid, applied on cloth and also covered with a rubber fingerstall. Under these, the epidermis wrinkles, softens and becomes dead white, and may be removed easily with a curet, exposing the red papillary growth beneath, which also should be curetted and treated with trichloracetic acid as previously indicated. If radium or the X-rays are not obtainable and there is no time to employ salicylic acid, a wart may be anesthetized with novocain and adrenalin, curetted, and the base treated with trichloracetic acid, taking care, however, to apply quickly a moist compress to mitigate the excessive action of the acid.

A remarkable feature of warts about the nails or anywhere on the digits, whether of the dorsal or volar surface, is the depth of the lesion as ascertained by curetting.

Some men still employ nitric acid in the treatment of warts, running the risk of producing keloidal scars.

X-rays, employed by an expert, constitute an excellent mode of treatment. Radium is easier of application to a small lesion, more prompt in its action, and should an accident occur, a radium burn is far less serious than an X-ray burn.

THE APPLICATION OF RADIUM.

A lead shield at least 1 mm. thick with a slit or hole in it exposing the surface to be radiated, is fitted over the finger. This shield is held in place with adhesive plaster. The radium plaque is now applied, unscreened, and also secured with adhesive plaster. As we have a very strong, highly concentrated plaque, containing 24.23 mgms. of radium element in a ten-cent piece size, we apply it only once for twenty minutes. If what is called a full strength plaque (10.8 mgms. radium element in 1.41x1.41 cm. square) is used, it may be applied for a longer time, broken into several sittings. With the strong plaque the reaction appears in from five to ten days, and for a few days is fairly lively, after which it subsides, and with it the wart disappears.

VERRUCA OF THE PALMAR OR PLANTER SURFACE.

Verrucae of the palmar surface of the fingers may be most annoying and disabling. I have seen an artisan thrown out of work for a long time by a verruca of the palmar surface of the pulp of the index finger. In another case a surgeon was prevented from operating because of a verruca on the radial side of the palmar surface of the index finger. In attempting to ligate deep in the abdomen, for instance, the ligature would invariably cut into the wart. This was very painful, and besides, exposed to the danger of infection. Nowadays these disabilities would be modified by wearing rubber gloves.

The denudation of the wart on the palmar surface is best effected by placing over it a piece of salicylic acid plaster (10%) and then over this a larger piece of adhesive plaster. This last procedure decidedly increases the action of the salicylic acid plaster, as it prevents the escape of the heat and closes in the secretions. After a few days or a week of this treatment the epidermis may be peeled off, exposing the wart, which may then be treated by curetting and the application of trichloracetic acid, as above described, or by the use of X-rays or radium.

Their frequency, the pain they occasion, the lameness, or complete disability to walk they involve, and the difficulties they present for diagnosis make warts of the sole the most important and most interesting of all. Because of the thickness and hardness of the epidermis these warts may look and feel like tumors or bumpinesses deeply seated in the connective tissue of the sole. They may be so painful, so enduring and so lumpy as to give rise to the suspicion of malignant disease. Malignant tumors of this region are, however, very rare. Instead of the papillae remaining under the epidermis they may push their way up through a well-like hole in it and appear on the surface like granulation tissue. This is what the chiropodists call a "rose corn."

In order to lay bare the verruca the same means are taken as in the similar condition on the palm with a difference, however, in the mode of application of the salicylic acid. Salicylic acid incorporated in a plaster is here inconvenient of application because it tends to roll up in walking. It is best to employ it as a salve. A very strong salve is made with salicylic acid, lanolin and vaseline incorporating twelve per cent. of the acid. This is buttered on a piece of cloth and spread over the affected sole. If the area to be treated is over the ball of the foot the cloth may be held in place by a loop, attached to the anterior edge of the cloth and thrown over one of the toes; if over the heel, it may be secured by attaching it to the ankle portion of an old sock.

When the warts are exposed they may be treated by curetting and trichloracetic acid as previously described. On account of the sensitiveness of the sole and the depth of the lesions this must be done under general anesthesia, now so easy of accomplishment by nitrous oxide gas. Local anesthesia with novocain and adrenalin is difficult because of the thickness of the epidermis and

the denseness of the subjacent connective tissue. Some surgeons cut out the growth, a bad practice, as the wart is apt to return in the scar no matter how widely removed, and furthermore a scar on the sole is undesirable.

The X-rays act admirably, but should be employed by an expert, as the dosage has to be heavy, and the danger of an X-ray burn is imminent. X-rays in this region have one advantage over radium which must not be overlooked; they have a powerful influence in inhibiting hyperidrosis, which is so frequently present on the palms and soles in verrucae of these regions, and which is undoubtedly an important etiological factor in their occurrence. The radiation of the entire sole or of the entire palm is sometimes curative of the two coincident affections. The sweating, however, may be dependent upon flat feet, or it may be due to eating too much sugar, or taking too much alcohol, or it may be a symptom of anemia, and in each of these contingencies the suitable treatment or regulation is of much more importance than forcibly lowering the function of the sweat glands with the X-rays, with the possibility of incurring a burn. The treatment by radium is the best by far we have employed, both for ease and safety of application and certainty of results.

It is our experience that these lesions on the sole require fully twice the quantity of radiation that they do on other regions of the body.

A consideration of the treatment of verrucae planae is omitted from the paper as it would unduly lengthen it.

NITRO-BENZOL POISONING.*

By F. F. GUNDRUM, M. D., Sacramento, Cal.

Nitro-Benzol, "Oil of Mirbane," or artificial bitter almond, is best known as a commercial product, being an intermediate substance formed in the manufacture of aniline from benzene. It is said also to be a fairly common by-product in the manufacture of explosives and has been used as a perfume for cheap soaps and shoe blacking. The poisonous character of this substance has been known for quite a long time. Judell,[1] as early as 1876 was able to collect 40 cases of poisoning with 13 deaths. Following the death of this author the work was taken up by his colleague, Filehne,[2] who completed an experimental examination of this poison in 1878. He carried out a very thorough study, chemical and experimental. His major conclusions are somewhat as follows: The time of appearance of symptoms in experimental animals varies from a few minutes to several hours, due to occasional mechanical difficulties which make absorption irregular. The poisonous action is not due to transformation in the body either into cyanogen or anilin. The characteristic picture of a patient acutely intoxicated with Nitro-Benzol is one of severe gastro-intestinal irritation, extreme cyanosis, coma, convulsions, etc. A chronic type of poisoning is met with in the trades where Nitro-Benzol is used. The symptoms are malaise, anemia, slight jaundice, cyanosis, loss of weight and strength. There is some difference of opinion regarding spectroscopic changes in the blood. Several authors have reported no change. Others have described a "Nitro-Benzol line" in the red. This line is not ordinarily seen in the animal or patient who recovers. The treatment recommended by Filehne was: First: Prevention, i. e. close regulation of all trades in which Oil of Mirbane is used. Second: In acute poisoning as rapid emptying of the alimentary tract as possible, avoiding oils and alcohols which increase the diffusibility of the drug; with blood transfusion in case of necessity. Third: In chronic poisoning removal from any contact with the poison.

During the 40 years which have passed since Filehne's work numerous cases of poisoning, acute and chronic, have been reported, practically all showing a clinical picture similar to the one already described. Hogarth[3] and Massini[4] reported acute poisoning without detailing spectroscopic findings. Roth[5] describes the blood spectrum of a patient who took a "kinder loeffel" of Nitro-Benzol to produce abortion. He saw a definite sharply outlined band in the red just next the band of Oxyhaemoglobin. Adams[6] collected a considerable number of cases which are especially interesting from the great variability of the amount taken and modes of entrance to the body. Fifteen individuals took it by mouth, dose average 23 to 120 minims with recovery; one man, however, who took "one swallow" died. There were six instances in which the drug was inhaled, one patient spilled Oil of Mirbane on his clothes and neglected to change for four hours; a second used it as a solvent for removing paraffine from his clothing. Both of these died. Two patients were poisoned by absorption through the skin, the first through an application of shoe blacking, the second a hair lotion. Two suicides, one took "5 cc." the other "one dram," both recovered. Three would-be abortionists, two recovered, one died after a dose amounting to 16 cc.

Our interest in Nitro-Benzol poisoning was aroused by the admission to the Sacramento County Hospital in January, 1915, of a patient, T. W., who arrived with the following history: He had been sentenced in a northern California court to a term at Folsom, and while waiting in the jail at Red Bluff for a train he contrived to get possession of six ounces of a "Germ Killer" used for destruction of vermin. During the railroad trip to Sacramento he drank this potion without detection. A few minutes before arriving at Sacramento it was noticed that he was looking quite ill, although he denied any discomfort. He was quite comatose, temperature normal, pulse 130, respiration 30; his face and mucous membranes showed an astonishing slaty grey cyanosis, which was present but to less extent over the entire body. Breathing was stertorous, pupils contracted, reacted sluggishly to light. Stomach washings had a peculiar "bitter almond" smell, noted by the deputy as being similar to the odor of the disinfectant used at the jail. Four hours after admission patient vomited about five

* Read before the Sacramento Society for Medical Improvement, February 19, 1918.

ounces of blood clots. A stool passed shortly afterward also contained a moderate amount of blood. Urine showed nothing remarkable. General physical examination negative. Ten cc. of blood from the median basilic vein was of a chocolate brown color. Spectroscopic examination, however, even in a fairly thick specimen, failed to show any lines except those of oxyhaemoglobin. During six days in bed with occasional moderate stimulation the cyanosis gradually disappeared. After about one week he was able to resume his interrupted journey, not apparently the worse off. Haemoglobin at the time of departure was 90%. Through the courtesy of the sheriff's office in Tehama County we were able to obtain a specimen of the germicide used by this patient as a suicidal agent. Inquiry of the manufacturers in Los Angeles as to the ingredients of the "Germ Killer" produced no reply. Through the kindness of Prof. Jaffa, Director of the Food and Drug Laboratory at Berkeley, we found that the solution contained 12.87% Nitro-Benzol, the remainder largely kerosene. We would have in 180 cc. therefore 23.16 cc. Nitro-Benzol. This is quite a large amount, more than was proven a lethal dose upon other occasions. Slow absorption from the gastro intestinal canal probably explains this recovery.

References.

1. Judell—Work completed by Filehne q. v.
2. Filehne—Archiv. fr. Experiment. Pathol. u Pharmacol. IX, 1878, p. 329.
3. Hogarth—British Medical Jour., London, January 27, 1912, p. 183.
4. Massini—Deutsch. Archiv. fr. Klinisch. Medizin. Leipzig, 101, 1910-11, p. 72.
5. Roth—Zentrallblt fr. Innere Medizin. Leipzig 34 Jahrg No. 17, p. 417, 1913.
6. Adams—Nitro-Benzol Poisoning. Transact. Assn. of America Physican. Vol. XXVII, p. 503, 1912.

THE ETIOLOGY AND SYMPTOMATOLOGY OF CHRONIC SUPPURATIVE OTITIS.*

By ADOLPH B. BAER, M. D., San Francisco.

Chronic middle ear suppurations occur more often in children than in adults. By far the largest percentage of purulent middle ear suppurations met with in adults date back to a childhood infection.

The acute middle ear suppurations become chronic for four different reasons: (1) Local changes which take place within the ear itself, (2) nasopharyngeal diseases and uncorrected nasopharyngeal abnormalities, (3) when they occur following or coincident with the anemias, tuberculosis, syphilis, diabetes, grip, scarlet fever, measles, diphtheria and typhoid fever, (4) malnutrition in children living in unsanitary surroundings.

The local conditions within the ear which aid in prolonging middle ear suppurations are, (a) localized or diffuse inflammation of the external meatus, with stricture, the formation of furuncles or granulations and polypi; (b) narrowing of the meatus, due to the sinking of its posterior superior wall, due to pressure from pus within the mastoid cells; (c) granulations and polypoid growths of the mucous membrane within the tympanic cavity and upon the tympanic membrane; (d) the retention and caseation of purulent secretions in the lateral concavities of the tympanum, in the cells of the mastoid process and in the depressions of the petrous bone; (e) caries developing within the mastoid or any other part of the temporal bone, and (f) cholesteatoma.

Bacteriology.—Bacteria enter the middle ear through the eustachian tube, through the external meatus in the presence of a perforation or rupture of the drum and through the lymph channels and blood vessels. The infection is practically always mixed or poly-bacterial. The prevailing micro-organisms found in the discharge may usually be considered as the pathologic agent in the individual case, although not necessarily the primary pathologic organism, especially in chronic cases. It is not possible, however, to prognosticate the future course or severity of a suppurative otitis from the micro-organism found in the discharge. It depends far more upon the patient's systemic condition and general resistance, or the state of physical exhaustion which may follow a prolonged ear suppuration, and the resulting local conditions occurring within in the ear itself.

In a general way the organisms most frequently associated with purulent otitis are the streptococcus, pneumococcus and streptococcus mucosus. Next in frequency are the staphylococcus albus and aureus, the bacillus proteus, and pyocyaneus, together with a long additional list which have no practical significance.

There is, of course, no longer any doubt that the streptococcus and pneumococcus and streptococcus mucosus are by far the most frequent bacterial causes of chronicity and complications. The staphylococcic group in the presence of a normal general resistance practically never results in serious ear complications, but is very frequently the cause of chronicity.

The tubercle bacillus is rarely seen in middle ear discharges and, even when present, does not become absolute proof of the tuberculous character of the disease. The presence of the tubercle bacilli in the scrapings from the middle ear is far more significant. The Klebs-Loeffler bacillus has occasionally been demonstrated.

The offensive, penetrating odor so frequently associated with chronic purulent otitis is due either to saprophites or to the carious bone itself.

Subjective Symptoms.—There may be none. Most frequently, however, we will have (1) a purulent discharge, (2) gradual loss of hearing, and (3) tinnitus. And in addition to these three symptoms, which are practically always present, there may be a feeling of pressure and heaviness in the head, obstinate, dull or lancinating pain and headache over the side and top of the head. The plain may be caused by absence or failure of free drainage, resulting from a temporary closure of the drum perforation, stricture of the meatus, or the presence of polypoid growths and granulations and cholesteatoma.

The pain increases as the pressure increases, when the pus becomes sacculated, when the

* Read before the San Francisco County Medical Society, September 25, 1917.

mucous membrane becomes ulcerated, when the cheesy masses in the middle ear and mastoid undergo decomposition and when there is caries of the temporal bone or involvement of the meninges. There may be a rise in temperature, dizziness, vomiting, loss of equilibrium and nystagmus, these latter symptoms being, of course, the indication of the beginning of one of the various brain or labyrinth complications. During the suppurative stage these head symptoms will increase if the discharge stops (owing to obstruction), and they will diminish or stop altogether if the obstruction be removed so as to permit of free drainage.

The subjective noises are usually intermittent but may be continuous, especially in anemic, cachectic, hysterical or nervous individuals, in syphilitics and when we have a combined adhesive process of more or less long standing.

Diminished or total loss of the sense of taste may be noticed by the patient owing to involvement of the chorda tympani nerve or tympanic plexus. Disturbances of hearing will vary greatly in different patients and at different times, depending upon the amount of suppuration, the varying degrees of swelling and destruction of the musous membranes, the permeability of the eustachian tubes, the presence of adhesions or ankylosis of the ossicles, the condition of the oval window and the presence or absence of labyrinth involvement. After the suppurative process has run its course, the degree of hearing disturbance will depend upon the permanent pathologic changes remaining in the middle and internal ears.

Objective Signs and Symptoms.—Tenderness on pressure over the mastoid, foul smelling discharge from the external meatus, sinking of posterior superior wall, and the presence of polypi and granulations in the external meatus. The presence of blood in the discharge usually points to polypi and vascular granulations.

Drum perforations are most frequently anterior-inferior or posterior-superior. They vary from pin-hole perforations to complete drum destruction, being greatest in scarlet fever, diphtheria, tuberculosis, diabetes, and syphilitic middle ear suppurations.

They may be round or oval, elliptical or semilunar, angular, heart-shaped or kidney-shaped and they may or may not extend to the margin, involving the annulus tympanicus. Multiple perforations usually mean tuberculosis. The margin of the perforation may remain free or become attached to the promontory wall itself, which will undergo changes varying from slight tumefaction or thickening to the presence of large granulations and polypi extending through the perforation. The ear ossicles are present in varying degrees and they may be partly or completely destroyed. Calcifications of various shapes and sizes may be present in the remains of the membrane. Perforations extending to the margin of the annulus tympanicus usually indicate the presence of bone necrosis at this point.

Perforations in Shrapnell's membrane may indicate a primary suppuration located within the attic, but more frequently a generalized suppurative process of the entire middle ear, which has cleared up and localized itself within the attic. These suppurations may produce very little disturbance of hearing and may run their course for years without symptoms, or they may be accompanied by intermittent ear pains, hemicranial headache, a feeling of pressure and heaviness and violent attacks of dizziness, these latter symptoms being usually associated with the formation of granulations and cholesteatoma in the attic and with caries of the external attic and labyrinth walls.

The terminations of chronic middle ear suppurations are, (a) cure with complete restoration of hearing, (b) disturbances of hearing of different degrees up to complete deafness, (c) desquamation and formation of cholesteatoma, (d) ulceration and carionecrosis in the temporal bone, with chronic mastoid and labyrinth changes, (e) the development of an acute exacerbation with all the symptoms of an acute middle ear suppuration, acute mastoid symptoms and acute labyrinth and brain symptoms.

177 Post Street.

THE PREVENTION AND TREATMENT OF LOCALIZED MUSCULAR CONTRACTURES.

By A. GOTTLIEB, M. D., San Francisco.

Muscular contractures following injuries or fractures in the vicinity of joints are frequent causes of limitation of motion not alone of the joints involved, but of the distant joints of the extremity as well. Such contractures result in loss of time to the injured, and reduce his working efficiency for a long time.

The production of post-traumatic localized myogenic contractures is ascribed to immobilization of injured joints in the same position for a continuous period of time. Immobilization antagonizes the circulation and nutrition, lessens the power of absorption and favors the organization of inflammatory exudates in the injured limb.

The various theories advanced to explain the physiologic mechanism in the production of localized myogenic contractures, I will not discuss in this place. They all attempt to prove the same truth, namely, that the existence of peripheral irritation is required to maintain continuous localized contraction of a muscle or muscle group, and that this latter leads to the resistant contractures. The seat of irritation is sought by some writers (Goldschneider,[1] Przhevalski[2]), in the sensory nerve endings of the muscle tendons; by others (McDougal,[3] Cooper[4]), in the nerve distribution within the muscle proper. All conclude that in the injury of the soft structures and in the lack of their normal metabolism lies the stimulus for the irritation of the nerve endings. Continuous muscular contraction is the method adopted by nature to secure rest; it is a wise and purposeful arrangement; but when this helpful aid is too persistent and excessive, it does harm by leaving the muscles in a lasting spastic contraction. Serious damage to the structure and the function of the muscles may

result from this continuous spasm, since fibrotic changes take place within the muscles. If precautions are not taken in the early period of treatment, resistant and troublesome contractures will result. These precautions are expressed in the early application of medico-mechanic treatment.

Our limitation in the prevention of this form of contractures is based upon the necessity of immobilizing neighboring joints to secure rest for the injured tissues, which is a *sine qua non* for the process of repair of bone or of soft structures.

Immobilization, as such, in the formation of contractures is only a minor factor, but in conjunction with an acute injury or a recent fracture, it does lasting harm. Therefore when fixation appears necessary, its duration should be shortened to the least possible time consistent with the character and the extent of the injury, and so bring about the release of the contracted tissues at the earliest moment, when functional treatment should be instituted. This treatment consists in massage and exercises. Massage effects the early absorption of inflammatory exudate and promotes local metabolism. It should be given at first for about 5 minutes; only gradually should the time be increased. I wish to emphasize that this massage, which should be very gentle in the beginning, can and should be executed by the surgeon himself; it should not be turned over to the masseur who is not efficiently trained for this kind of work. More harm than good may result from inefficient massage.

The physiologic effect of exercises is similar to that of massage. It is of inestimable value in the prevention of contractures. The exercises consist in assistive and resistive movement of the joints. Not only should the joint, in or near which the injury has occurred, be manipulated, but the distant joints of the extremity as well. Assistive movements are given first, and only after the muscles have gained in strength, are resistive exercises added. In applying massage and exercises precaution should be taken against the causation of muscular spasm; the latter always indicates that the muscle has been overstimulated and gives notice that further manipulation will be harmful.

The treatment of developed muscular contractures is divided into medico-mechanic and operative measures. The latter I will not discuss. The medico-mechanic treatment aims to restore the metabolic function of the affected muscles and to overcome the muscular resistance which limits the motion of the joints in question.

According to Lange,[5] 83% of contractures were curable by medico-mechanic treatment, while in only 17%, where conservative measures failed, was it necessary to resort to operative procedures. G. G. Cooper[1] attributes the cure of most myogenic contractures to the nonsurgical measures and highly recommends their application. The same opinion is expressed by Pelteson[6] and many other European surgeons who have used various medico-mechanic means to restore normal function to many cases of muscular contractures which have followed fractures and manifold injuries sustained on the battlefield of war.

Before the application of massage and exercises, the deformed extremity is exposed to either radiant or convective heat, to light or to electrically generated heat, i. e., diathermy.

The influence of radiant and convective heat and radiant light upon the contracted muscles is based upon the evolution of heat within the tissues. The induced hyperemia exerts important local influence: the tissues relax, the tension is relieved, the blood vessels dilate and a fresh supply of arterial blood invades the area. The fibrous changes within the muscles have constricted the vessels and exsanguinated them. The evolved heat softens the fibrous tissues, opens them up and thus promotes metabolic changes within the muscles. For the application of radiant heat I employ the incandescent light, the arc lamp or the electric bath cabinet. I use the radiant heat in preference to the hot air bath, because I believe that local metabolism is influenced not only by the heat alone, but that the penetrating rays of light have a chemical action upon the tissues, inducing oxidation and promoting metabolism.

No method of heating the tissues surpasses the use of diathermy, by which is meant heating of the tissues by an electrical current of high frequency. The advantage of producing heat in this manner are that the heat can easily be measured and localized, without, however, the unpleasant sensation usually associated with an electric current. Further, without unduly heating the skin, a uniform current of heat passes from one electrode to the other, heating the tissues which lie between the electrodes. For the application of this treatment I use the Tesla high frequency apparatus.

Following the process of heating, mechanotherapeutic treatment is given. This consists in appropriate exercises and massage which are carried out manually. It is an erroneous belief that costly appliances are necessary for this kind of treatment. The best results are obtained without complicated apparatus, as is practiced successfully in Europe during the present war. I wish to emphasize the value of effleurage or stroking in the direction of the lymph flow and the importance of active exercises in the treatment of contracted muscles. Effleurage favors nutrition of the tissues by increasing the circulation within them. Stroking of the part in the direction of the venous and lymph flow empties the veins and the lymph vessels; fresh blood and lymph again fill the vessels from behind and thus a continuous current of these nutritive fluids is promoted.

By active exercises are understood all those movements which are voluntarily executed by the patient to overcome resistance. The operator only assists or resists these intentional movements. Assistive exercises aim to diminish the resistance offered by the contractures; they should by no means become forcible, because any violent stretching will rupture the tissues, cause hemorrhage and further restrict motion. The most valuable of all movements in these cases are the resistive exercises. These are carried out by supplying resistance to active movements. Resistance is offered either by

the hands of the operator or by mechanical means; the former is preferable to the latter, because exact dosage and regulation of the resistance, in other worths, individualization of motion, cannot be supplied by any apparatus, whether a Zander, a Herz or a Krukenberg. No mechanical device is able to perceive that slight increase of spasm which follows when the contracted muscles are irritated through overwork. To the experienced hand of the operator this spasm, mild as it may be, serves as an indicator that further motion must be suspended, lest harm may ensue.

CONCLUSIONS.

1. The injured or fractured extremity should be immobilized not longer than consistent with the repair of the tissues.

2. To prevent muscular contractures, functional treatment, mechano-therapy, must be instituted at the earliest possible time.

3. Medico-mechanic measures are to be applied persistently for the cure of myogenic contractures; only after failure of a thorough conservative treatment should forcible stretching be undertaken.

Discussion.

Dr. J. Rosenstirn: The various methods of massage and thermo-therapeutics have developed into a specialty which is somewhat foreign to the general surgeon. For a great many years I have condemned too long immobilization of fractures, and I believe it has been recognized that those surgeons who do not over-extend the period of immobilization of fractures get the best results. For contractures I have seen excellent results from Dr. Gottlieb's therapeutic measures, and I believe that the judicious employment of such measures, carried out for a more or less prolonged period, will give excellent results and do away with our brutal breaking of adhesions and brutal extensions which were practiced up to a few years ago.

Dr. Harry M. Sherman: I am very glad to be asked to speak on this subject, because I have had to do with some phases of it and have had experiences different from those which Dr. Rosenstirn has mentioned. Immobilization for a traumatized tissue must be persisted in until the trauma has been recovered from so that mobilization shall not reproduce in any phase a return of the traumatized condition. A fractured bone must be held until it is consolidated; mobilization before that time will only end in slipping or bending of fragments and failure to get the anatomical result desired. I am willing to agree that after the bone has healed further immobilization is unnecessary, but if I were to choose between keeping the splint on too long, or removing it too soon, I should prefer keeping it on too long.

I am perfectly delighted to agree with Dr. Gottlieb about massage—I think it is one of the most dangerous things in the hands of people who pretend to be experts.

The late Dr. McMonagle at one time had patients massaged by a Swedish woman, and they all had very long convalescences; after a while he had it done no more, and his patients made more comfortable and quicker recoveries. Massage requires effort on the part of the patient in accepting and tolerating it. It can easily exhaust, or retraumatize.

Massage in bone and joint cases must be given with the full knowledge that on one side you have a strong person, on the other a bone, and between them traumatized tissue, which is wholly at the mercy of the masseur. Head work rather than hand work is needed here and it is sometimes hard to get. Recently I had a girl in whom we were trying to get an increase in elbow joint motion. I talked to the masseuse and told her how I wanted her work done and that it should **not be permitted to hurt,** but this woman could not understand that force must not be used; she gave pain, she did harm, and the treatments had to be stopped. Brisement is always reprehensible; the man who does it takes a greater chance than the man who goes to war; he will do damage more frequently than good.

I always allow children to work their own joints loose without any massage or baking; if a child cannot get its own joints loose, no one else can.

Some of the disabling, crippling conditions near joints are outside of the muscles entirely, as in a case of extreme equinus—one due to spina bifida occulta, on which I had operated when the patient was a baby—where the lesion was in a plaque of fibrous tissue behind the joint, under the tendo-achillis. No mobility was given the foot by the section of the tendo-achillis, and a cutting of the fibrous tissue through an open incision from the inner to the outer sides of the back of the joint, including the posterior ligament, was necessary. Another girl had this same deformity, due to a burn on the front of the leg and neglect of the position of the foot during a tedious healing. I found the same obstruction to dorsal extension of the foot, and had to treat it in the same way.

Dr. George J. McChesney: I would like to ask Dr. Gottlieb whether he finds any difference in therapeutic efficiency in the use of the X-ray, or baking by means of electric light or by the use of heliotherapy, and if he has compared the use of radium with these.

Dr. Gottlieb: The object of reading my paper was to bring to your notice such conditions as are frequently turned loose without treatment. These patients usually land in the hands of osteopaths, chiropractors, naturopaths and other so-called doctors. It is time that for these cases medico-mechanic measures should be applied by the orthopedic or the general surgeon.

With Dr. Sherman's remark I wish to disagree. I did not say that the immobilization should be discontinued; but that while the extremity is immobilized as long as consistent with the process of repair, active and, in time, resistive exercises should be given.

To the question of Dr. McChesney, I wish to answer that I have not applied X-ray or radium in these cases.

References.

1 Goldschneider: Gesammelte Abhandlungen: Physiology des Muskelsinnes. 1898. Bd. 2.
2 Przhevalski: Russki Chirurgicheski Archiv. 1904, p. 316.
3 McDougal: A theory of muscular contractures. London.
4 Cooper, G. G.: Brit. Med. Jour. 1917, p. 28.
5 Lange, F.: Muenchener med. Wochenschrift. Vereins und Kongressberichte. 1916, p. 282.
6 Palteson: Muench. med. Woch., 1916, p. 285.

ARCH DEFECTS OF THE HUMAN FOOT.

By ETHAN H. SMITH, M. D., San Francisco.

In the past the profession of medicine has given all too little attention to defects of the arch of the human foot. They have either not paid heed to it at all, or have heedlessly sent the patient to a shoe store or instrument house, with advice to secure a "good arch support." They have never taken the trouble to find out whether or not such a thing as a good arch support was on the market, taking it for granted that because they were on sale they must necessarily accomplish the purpose for which they were made.

It is impossible to properly treat defects of the arches of the feet without understanding the pathology that is present in such cases.

First of all, in little children we have the type of foot known to the literature of the past as the weak foot. This condition was formerly much misunderstood; the ligaments and muscles were blamed for the deformity and the disability accompanying it. Since the advent of the X-ray, many feet of children have been radiographed, and we have come to a better understanding of the weak foot. Instead of the muscles and ligaments being principally to blame, we find that the weak foot is due to delayed ossification of the bones of the foot. Recently articles have appeared in medical journals giving illustrations made from X-ray plates of children's feet, showing an alleged absence of some of the bones of the foot. In looking over these illustrations it may be noted that the bones that are presumed to be absent are those of the medio and metatarsal region. From the contour of the soft parts, as shown in these same illustrations, it is very reasonable to believe that the bones are not absent, but that there is a delayed ossification causing the bones to be very soft and pliable. As a result of this pliability we have a very weak foot, which is the most difficult to try to get into shape, and retain in a semblance of the normal, of any foot showing arch trouble with which we have to deal. Fortunately, as a rule these feet are not very painful. As a result of the weakness in the foot, the tibial muscles are very much relaxed, but have always been so and do not cause as much disability as would be the case in a foot that had been normal for some years and then broken down.

We have two types of so-called broken arch: one the most prevalent of all, the functional type; and a rare type which we may be permitted to call an organic type of flat foot. In the organic type the foot is very rigid from the beginning, the bone structure is softened and the bones undergo great changes in shape in a similar manner to the changes in the shape of the vertebrae in a bad organic scoliosis. It is well nigh impossible to correct this deformity, or even partially correct it, either with or without operation. The whole foot has lost its semblance to the normal foot and the condition is one which is a very unpromising sort of case for anyone to undertake. These feet undergo rapid and permanent ankylosis.

In the functional type of flat foot there is no disability with the arch until the tibial muscles have elongated and become partially atrophic; especially is this true of the posterior tibial muscle. The arch of the foot does not pronate. The term *pronation of the foot* is a grave misnomer. It would imply that the tibia rotated over the fibula as does the radius over the ulna at the wrist. This is both anatomically and mechanically impossible. There is an abduction of all the foot anterior to the astragalus on the head of the astragalus. This produces a buckling inward of the arch. In pronounced cases the arch may sag, but not enough to be even a semblance of pronation. We would not call the flattening out of the hand placed with the palm down a part of the act of pronation, nor is a flattening of the foot a pronation in any sense of the word.

Where this abduction occurs in early life the scaphoid is partially or completely dislocated from the head of the astragalus and comes to rest on the fibular side of the neck of the astragalus; the neck of the astragalus is gradually bent toward the internal malleolus, causing a permanent and incurable deformity. All of the bones of the mediotarsal region become displaced to some degree.

Gonorrheal arthritis of the foot is much more prevalent than has been realized by the profession. This infection will cause a most rapid distortion of the arch of the type known as broken arch or flat foot. It also tends to rapid ankylosis and permanent disability in many cases. This type of foot has been almost ignored in treating flat foot and no end of misery has resulted.

Traumatic flat foot is not uncommon. This results from jumping on the edge of a stair tread, or round stone, or some other object, with all the weight striking under the hollow of the foot. The arch buckles inward immediately and remains in the distorted position until replaced under an anesthetic. No replacement should ever be undertaken until absence of fracture has been determined by the X-ray.

Infections of the articulations of the feet from the teeth, tonsils, genito-urinary tract or gastro-intestinal tract may all aggravate troubles with the arches of the feet, causing failure of any sort of treatment until such focal centers of infection have been sought out and eradicated.

Insisting on children toeing out in walking is utterly bad. Most people seem to be imbued with a superstition that it is a disgrace to be "pigeon-toed." They insist on a child walking with the foot rotated outward, thus hampering the normal action of the ankle and foot, straining the posterior tibial muscles and paving the way for flat foot and bunions.

Spring heel shoes for babies, and all shoes for little children, are made with a flat sole without any shape to correspond to the normal contour of the foot. The soft foot, with bones only beginning to ossify, is buttoned or laced down to this flat sole, and many broken arches result. Children's shoes are a lot of unskilfully designed leather pods, designed by careless manufacturers who are totally ignorant of the necessities of the growing foot. Many brands of grotesque shoes are advertised as the most wonderful shoes ever designed. Most of these shoes are a farce or worse and have nothing of merit about them. People, even members of our profession, will scoff at a patent medicine and swallow the most astounding lies about shoes.

Paralytic flat foot must not be confused with the ordinary types of derangement of the longitudinal arch. It is seldom ever amenable to treatment such as would prove effective in the commoner types of arch trouble. It must be considered in a class by itself and treated accordingly.

Any flat foot that is in any way sore or painful about the bones or joints should be radiographed. No treatment of such a foot should be undertaken by any method until a careful radiograph shows absence of destructive bone lesions. Marked flat foot does not exclude serious infections of the bones. The author saw a case in a man of about 35 years some years ago who had exaggerated

flat foot. The feet were quite sore but not rigid. The patient denied gonorrhea and showed no signs of the disease. There was no swelling of either foot, no edema and no sign of tenosynovitis. The soreness was in the mediotarsal region. The feet were put up in plaster of paris in moderate correction. They were padded with exceptional care. The man complained bitterly of one foot, but not much of the other. After a few weeks he was given arch supports and disappeared. About three months thereafter the author met him in a hospital ward. He had undergone amputation of the painful foot for extensive destructive disease of the bones, the nature of which could not be learned. At that time it was difficult to get a radiograph of anything else than a fracture.

Since then the author was consulted by a boy about fifteen years of age. He had exaggerated flat feet. He had been treated in a good clinic in an excellent hospital, where the clinician had prescribed steel arch supports, without any preliminary corrective treatment. In a few days one foot was swollen and excessively painful. He was told that he must expect that until his arches were raised. On coming to me, I sent him for an X-ray plate, which showed a cavity (probably tubercular) in the body of the astragalus. He passed out of my hands into the free ward of a hospital which insisted on all operations being done by its own staff, and I lost track of the case.

These cases are mentioned to show what an important condition this is from a surgical standpoint and how dangerous it is to treat them as an indifferent sort of case. It is still more disastrous to have these cases tampered with by chiropodists, shoe dealers and tinkering mechanics.

TREATMENT.

Operation has been suggested for this condition. Among the early operative measures suggested was arthrodesis at the articulation between the scaphoid bone and the astragalus. This procedure gave most discouraging results, and arthrodesis of this articulation, combined with an autogenous bone graft through the scaphoid into the neck of the astragalus, has been suggested recently by Albee. The latter operation, when done by those associated directly with Dr. Albee himself, has been of doubtful expediency. The author of this paper has recently seen a case in which the operation was an utter failure. The articular cartilage seemed not to have been completely removed from the surface of the astragalus and opposing surface of the scaphoid bone, and a condition similar to that known as osteochondritis has developed. The bone graft promptly broke in one foot and did not hold in the other. The scaphoid bone promptly became displaced on the head of the astragalus, and in the case of the foot in which the bone graft broke, the irritation has produced a very serious condition. The other foot is comfortable only when supported by a proper arch support.

In cases of organic flat foot with great distortion, much rigidity, and rapid and complete ankylosis, a large cuneiform osteotomy will improve the shape and position of the foot and may be of some benefit.

Shows slow progress of ossification in weak foot.

This throws us back to the older methods of treatment, but because of its being more recent, I mention it first.

In treating flat foot, many cases must be over corrected and put up in strong plaster of paris from toes to knee. The foot must be well padded with good absorbent cotton, and some cases will also require felt pads to protect bony prominences. The cotton must be bound firmly, but comfortably, in place with a gauze bandage before the plaster is applied. Sheet wadding is an abomination in surgery and worse under plaster of paris than elsewhere. The plaster must be worn from four to twelve weeks, changing it every two to three weeks. The plaster bandage must be filled in under the arch so as to prevent the plaster dressing from breaking down and releasing the over corrected arch. A gonorrheal foot must *never* be put up in correction sufficient to cause pain. Some rigid flat feet must be redressed under an anesthetic, thus forcibly correcting them, over correcting them when possible, and then put in plaster. A gonorrheal foot must *not be forcibly* corrected, as it will cause fracture of the bones, rupture of the ligaments, and result in unspeakable torture to the patient and a relapse that is worse than the original deformity. Plaster of paris to the extent of not causing pain is ideal treatment for these feet, combined with suitable treatment of the primary gonorrheal focus. Early application of plaster in gonorrheal feet will allay irritation and pre-

A normal line from heel to toe.

vent ankylosis, provided the feet are abundantly padded and not too tightly enveloped.

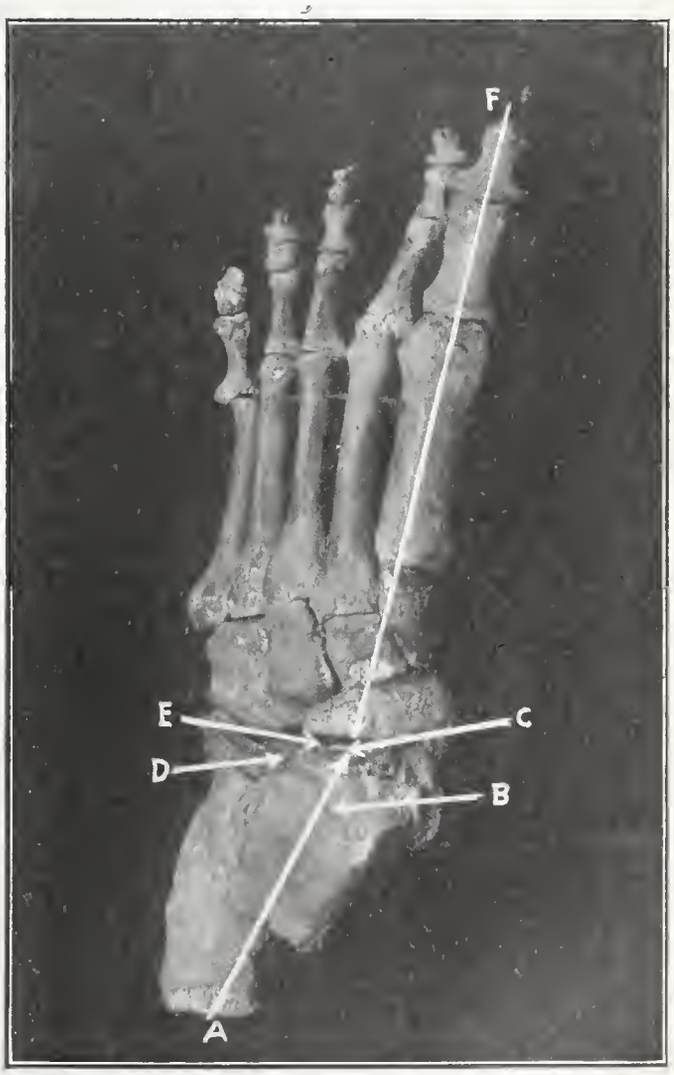
Nearly all the arch supports in the market are shaped to conform to an abducted foot and would ruin a normal arch. They raise under the articulation between the scaphoid and internal cuneiform bones, lift up this articulation a trifle, bruise these bones, and allow the arch to sag inward and throw the heel outward still more. They still farther damage the posterior tibial muscle. They are absurdly wrong in principle and are a disastrous failure. The Whitman plate is constructed on fairly normal lines, but is as comfortable as a steel trap and impossible for most patients to wear. It does not give consideration to the weak tibial muscles, and contracted peronei and calf muscles. This contraction of muscles is also to be overcome by the plaster of paris. A metal plate under a gonorrheal or any infected foot will in many cases put a patient off his feet and frequently lay him up in bed for weeks.

First put the feet up in plaster and afterward put a felt, leather-covered arch support of normal shape under the foot, in a straight last, broad, strong-shanked shoe. Do not try to compel women to wear flat-heeled shoes after having worn high heels. The flexor muscles of the thigh and leg are permanently shortened; a flat heel will cause intolerable pain in the back and limbs, and your treatment will be abandoned.

If there is metatarsalgia, or Morton's painful foot, associated with flat foot, as frequently happens, have a felt metatarsal pad applied to the felt arch support so that it will relieve the pressure on the metatarso-phalangeal articulations. Metatarsalgia is invariably due to arthritis in the metatarso-phalangeal joints. It is indicated by one or more calluses over these joints on the sole of the foot and a more or less painful joint or joints, easily detected by manipulating the joints. It is *never* due to pinching of a nerve between the bones.

Anatomic shoes and much-advertised shoes are a fraud. The ground gripper shoe is the most grotesque shoe of the lot. Swing last shoes are very common now and are all bad, superlatively bad. They ruin the fourth and fifth toes and the fifth metatarso-phalangeal joint. Manufacturers are deluging the market with swing last shoes in a vain attempt to prevent flat foot.

The plantar tissues do not stretch. If they did we would not have flat foot so commonly as at present. The plantar tissues will contract if irritated and inflamed, and aggravate flat foot. I have recently seen a so-called broken arch associated with marked pes cavus. Arch supports must be made for each individual. As well try to buy



A—Line of astragalus.
B—Head of astragalus uncovered.
C—Pseudo-arthrosis side of neck of astragalus.
D—Exostosis formation due to abnormal pull of ligaments.
E—Sliding inward of astragalus.
F—Line showing degree of abduction of foot anterior to head of astragalus.

ready made false teeth as ready made arch supports.

Walking on stone pavements while wearing bad shoes is the most prevalent cause of flat foot. Shop employees who stand for hours on stone floors and frequently lift heavy commodities often have flat foot. Soft-soled, weak-shanked shoes on stone pavements are a ridiculously frequent cause.

Not much progress will be made against flat foot until the whole problem is taken up by our profession and studied intelligently and in good faith.

The impression of the sole of the foot on a board or glass plate is no test whatsoever of a flat foot. If the foot is markedly flat it can be seen at a glance. If only slightly flat, the impress made by the sole may be that of a presumably normal foot. The leg muscles must be tested, and look for abduction of the foot in front of the ankle, with inward buckling of the arch and shifting of the scaphoid bone on the head of the astragalus.

GONORRHOEA IN WOMEN.*

WILLIAM E. STEVENS, M. D., San Francisco.

Gonorrhoea in women, although a most serious and frequently fatal disease, the immediate and remote consequences of which are probably responsible for more suffering and unhappiness than all other diseases combined, is nevertheless more often neglected than any other pathological condition of the female genito-urinary tract. At the present time when so much depends upon the health of our armed forces the necessity for its detection and eradication is of first importance, for notwithstanding the measures directed toward the suppression of prostitution and illicit intercourse, prophylactic treatment and punishment for concealment, the number of infections among our soldiers at home and abroad is sufficient to cause the army officials grave concern as it ranks first in the list of infectious diseases as a cause of physical debility. In a recent communication the surgeon general of the public health service states that venereal disease is the most serious problem from the standpoint of military efficiency which confronts the army authorities today.

This paper is based upon the examination of seven hundred and thirty-one women arrested upon the charge of prostitution or vagrancy and the treatment of one hundred and seventy-five, the majority of whom were confined in a large ward set aside for that purpose by the Board of Health in the San Francisco County Hospital. Of this number one hundred and forty-seven patients were found to be infected with gonorrhoea, two hundred and forty-three with syphilis and ninety-six with both gonorrhoea and syphilis.

The diagnosis of gonorrhoea was based upon the detection of the organism in the secretions or the presence of a two or three plus positive complement fixation test together with characteristic clinical symptoms. Many cases were doubtlessly overlooked even in those subjected to repeated examinations for the difficulty of detection of gonococci in women, especially in chronic infections, is universally recognized and the fallibility of the complement fixation test in its present form is likewise understood. The absence of subjective symptoms is of little importance but a history of pelvic inflammation and menstrual irregularities, burning during urination and vesical irritability at the time the discharge first made its appearance is most suggestive.

The following procedure is followed in the investigation of our cases:

Smears are first obtained for microscopical examination by compression of the Bartholinian glands between the two index fingers. Parenthetically permit me to advise precaution during this procedure. Recently while examining an infected gland a small amount of secretion was forcibly ejected a distance of almost two feet, narrowly missing the eyes of the examiner.

Following the examination of these glands, smears are obtained from the urethra by forcibly stroking the canal from the internal to the external meatus. In the absence of microscopical secretion the two glass test is of decided value in the diagnosis of urethral conditions in women as well as in men. After a vaginal douche of sterile water or salt solution and a thorough cleansing of the external genitals the urine is voided in two portions. Cloudiness of the first portion or the detection of pus miscoscopically denotes the presence of urethritis. I would like to emphasize the necessity for endoscopy in women, a procedure which has not received the attention it deserves. The Farrar female endoscope which is a Kelly urethroscope with a lamp at the distal extremity is most useful in the examination and treatment of the female urethra. Following the urethral examination an effort is next made to obtain secretion from Skene's glands by compressing them between the index fingers. This is a procedure frequently overlooked by the genito-urinary surgeon as well as the general practitioner and its neglect is often responsible for failure in the diagnosis and treatment of these cases. In a number of instances the only evidence of gonorrhoea was found in secretion expressed in the above manner from one of these small glands.

Smears are obtained from the cervix by compressing the anterior and posterior lips several times between the blades of a bivalve speculum after a thorough cleansing with cotton tipped applicators. Gonoccocci are more frequently demonstrated following this traumatism. It is also sometimes possible to obtain positive smears by massaging the Fallopian tubes and fundus of the uterus in the direction of the cervix. Obviously these methods should not be followed in the presence of an acute infection. In children and virgins the endoscope is of value for examination and treatment of both the cervix and vagina.

In a series of one hundred and twelve cases, either microscopically positive or clinically positive together with a two or three plus positive complement fixation, the infection was located in the cervix in sixty-nine patients, in the urethra in twenty-eight and in one or both Bartholinian glands in twenty-two patients.

In ninety cases which were clinically positive only the urethra was involved in thirty-nine, the

* Read before the Forty-seventh Annual Meeting of the Medical Society, State of California, Del Monte, April 1918.

cervix in twenty-nine and one or both Bartholinian glands in twenty-seven.

It is to be noted that in the positive cases, a large majority of which were chronic, the cervix was most frequently involved, next the urethra and lastly the Bartholinian glands, while in the cases which were clinically positive only the number of urethral infections exceeded those of the cervix by about forty per cent. The frequency of Bartholinian gland involvement in both positive and negative cases is also of interest.

While infection of the lower genito-urinary tract is most commonly associated with the gonococcus, other organisms are frequently responsible.

In two hundred and ninety-four suspicious cases the gonococcus was the offender in one hundred and thirty-five and other organisms in ninety. Parenthetically permit me to call attention to the fact that a non specific urethritis usually associated with a trigonitis is very often responsible for urethral discharge and urinary disturbances in women. In these conditions the shortness of the urethra, together with its close proximity to the vagina and rectum, are without doubt the most important etiological factors.

In fifty suspicious cervices in which gonococci could not be demonstrated, staphylococci were present in thirty-six, various diplococci in twenty-nine, streptococci in nine, bacilli in seven and diplobacilli in two. In twenty-five suspicious urethrae in which it was impossible to find gram negative intracellular organisms other diplococci were present in eighteen, staphylococci in eight, streptococci in two, diplobacilli in two and other bacilli in one. In twenty-two suspicious Bartholinian glands in which the gonococcus was not detected other diplocci were found in twelve, staphylococci in eight, streptococci in five and bacilli in three.

The frequency of the coccus in these locations is interesting, differing as it does from the upper urinary tract in the female where the colon bacillus is usually responsible for the infection.

Of greater importance however is the prevalence of gram positive and other diplococci. In this connection the experiments of Edward E. Johnson of San Francisco are illuminating. He claims to have removed from the peritoneal cavity of guinea pigs, after the injection of certain cultures of gram positive diplococci, a gram negative intracellular diplococcus having all the cultural and morphological characteristics of the gonococcus, inoculation with the latter producing gonorrhoeal ophthalmia. These gram negative organisms regained their gram positive characteristics upon reculturing upon acid media. This would explain the infectiousness of many of these women in whose genital organs the gram positive and degenerative forms of diplococci are quite common but the characteristic gram negative intracellular diplococci so difficult of demonstration.

As the gonorrheal complement fixation test is a genuine antigen antibody test and no other disease will give a positive reaction it is of value from a positive standpoint. In a series of one thousand cases Shupe did not obtain a positive reaction except in the presence of gonorrhoea unless the patient had received antigonococcus vaccine. It will give a positive in fifty to sixty per cent. of cases of pyosalpingitis and is consequently of value in differentiating pelvic inflammatory conditions in women.

For the following reasons it is of less value than the Wassermann complement fixation test for syphilis, a negative reaction being of little diagnostic importance:

1. The gonococcus antibody is usually produced in small amounts.
2. It is difficult to prepare and preserve a polyvalent gonoccocic antigen.
3. There are a large number of different strains of gonoccoccus.
4. Except in vulvo-vaginitis in children a positive reaction is seldom obtained in the female unless the infection has reached the cervix.

The technique in our series of one hundred and sixty-three cases is identical with that of the Wassermann except that the antigen used was the gonococcus antigen prepared by Parke, Davis & Company. It is always titrated before using.

Twenty-three plus and forty-one two-plus positives were obtained, making a total of sixty-one cases in which we considered the serological findings sufficient evidence of gonorrhoeal infection. Of this number ten were microscopically positive while two had a previous history of gonorrhoea. Seven were microscopically and clinically positive and sixteen were clinically positive only. The balance were both clinically and microscopically negative.

Gradwohl, using the Parke, Davis antigen, claims fifty-six per cent. more positives by using a technique similar to the Gradwohl modification of the Hecht-Weinberg test for syphilis. This embodies the use of unheated sera and the utilization of the natural complement and anti-sheep amboceptor. We have used this method in a small series of cases but so far find it of little additional value.

TREATMENT.

Acute urethritis is treated by rest in bed, restricted diet, large quantities of liquids internally, sedatives such as hyoscyamus and drugs rendering the urine alkaline such as potassium acetate and occasionally by the injection of ten per cent. argyrol solution. Local treatment is usually reserved however for subacute and chronic cases. We have obtained the best results in the latter by the instillation of one to three per cent. solutions of silver nitrate and the application of a ten per cent. solution of the same drug through the female urethroscope. In skenitis the ducts should be incised, cauterized or fulgurated by means of a fine wire. Whereas either of these measures will cure the condition, instillations are of little value, simply resulting in loss of time.

Removal of the Bartholinian glands or fulguration is likewise the only satisfactory method of treating infections of these organs.

In cervicitis we have obtained good results in some cases from the use of twenty per cent. solu-

tions of silver nitrate following a thorough cleansing of the canal. In a limited number of private patients I have found fulguration of decided value in this location. Occasionally amputation of the cervix will be required. In the presence of gonorrhoeal pus tubes treatment directed toward the cervix alone will be of little value as this source of reinfection must naturally be eradicated before a cure can be expected.

Gonorrhoeal endometritis is an uncommon condition and the use of the overworked curette following this diagnosis has resulted in much harm and has seldom been of benefit to the patient.

Finally permit me to emphasize the fact that radical surgical measures are frequently indicated in Neisser infections and that temporizing with injections, etc., is unjustifiable, merely resulting in the loss of time. It must be admitted that it is often impossible to positively assert that a gonorrhoea is cured, for notwithstanding the absence of objective and subjective symptoms some women apparently remain capable of infection as long as they live. This fact, however, should not discourage us in our attempts to conquer a most serious disease.

Thanks are due Dr. Agnes Walker and J. T. Boyer of the San Francisco Health Department and Dr. Maurice Heppner of the San Francisco Hospital for their valuable assistance in the examination and treatment of these cases.

Shreve Building.

Book Reviews

Materia Medica, Pharmacology, Therapeutics and Prescription Writing. For Students and Practitioners. By Walter A. Bastedo, Ph. G., M. D., Assistant Professor of Clinical Medicine Columbia University. Second Edition, Reset. Octavo of 654 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $4.00 net.

Many workers recognize that the field of pharmacology has become so wide that it is now impossible for one person to speak authoritatively on all of its problems and this holds with double force with respect to the combined subjects of pharmacology and therapeutics. Most of us are looking to the future for a handbook of pharmacology in which the individual drugs shall be discussed by numerous conscientious workers who have devoted time to the drugs they discuss and would therefore be in a position to valuate the immense literature which has grown up. Until that time comes, we must rely upon general treatises written by one or two persons and such books must have their limitations.

The work of Bastedo is based on the lecture courses given at Columbia University. It is clearly and attractively written and holds one's attention. The publishers have enhanced its value by the use of clear type and proper spacing. The book is written by a clinician evidently for students who intend to enter the practice of medicine. Such students will find valuable hints and suggestions as to treatment and will learn the relation of pharmacology to therapeutics. It is distinctly a textbook, but a good one, hardly full enough for the general practitioner. The views expressed are up to date, but at times seem dogmatic, the reasons not always being given in detail. Some chapters might have been expanded with profit.

The reviewer believes that part of our present failure in medicine is due to the fact that we have not always attempted to develop the logical or critical ability of our students and have made dogmatic statements, whereas students should be taught to criticize the evidence for their beliefs. Such a critical textbook in pharmacology is lacking. The work of Bastedo has been reprinted several times and has just been revised into a new edition. This would indicate its popularity.

A. C. C.

Postgraduate Medicine. Prevention and Treatment of Disease. By Augustus Caillé. Illustrated. N. Y.: Appleton. 1918.

Regarded from the viewpoint of a manual of treatment it is hardly fair to the author to characterize this somewhat sketchy though exhaustive volume as being superficial and therefore unsatisfactory. Rather should this work be read as a most interesting and valuably suggestive epitome of the thoughts on treatment by a man with a world of experience and a vast fund of resources. There is not a field of medicine that is not given recognition and not a mode of treatment that is not given critical notice and mention. A reading of this book will be sure to give one a number of valuable suggestions in any field that can be mentioned.

And yet, one feels that the author has written a book that should be regarded as a collection of the wisdom and experience of a wise and experienced medical man, and not a volume for reference in case of need. Thus the usefulness of Dr. Caillé's book is more in the nature of a postgraduate course in the treatment of disease, than a manual to be consulted when the diagnosis is determined but the treatment still in doubt. A further objection to the adoption of this work as a reference book might be raised from the point of view that nearly all that is taught in this book can be found in general text-books as well as in original sources. It would be a sad commentary on the amount of reading a medical man has done if he were to find much that was new or unfamiliar in all of the thousand pages of the text.

G. H. T.

Principles of Mental Hygiene. By Wm. A. White. Introduction by Smith Ely Jelliffe. N. Y.: Macmillan. 1917. Price $2.00.

Now that the domain of the psychiatrist and alienist is no longer a field that is the peculiar property of the initiated few; now that medical men and women must reckon with the social variation from the normal as well as the physical variations; now that the public conscience is awake to the fact that there is a duty that is owed to those who are handicapped by inferior nervous or mental makeup, it is with genuine pleasure that such a book as this is welcomed. In language that is simple, clear, in a mode of exposition that is authoritative yet kindly, Professor White has given to the profession a volume that will open to many a delightful field in the medical world. Too many of our profession are neglectful of the social side of medicine. This may be through laziness, indifference or through lack of perception or of training, but this field can no longer be ignored. The study of our cases from the social aspect is as essential as that from any other point of view. Social problems are presented to the doctor more frequently than to any other, unless it be the spiritual advisor, whose place the doctor must so often fill. In this world of ours, conflict and adjustment, heredity and environment, stimulus and reaction, individual and herd relations, reason and instinct form the chief motives of our existences. Let us study these things; let us apply our knowledge to our daily round of cases; let us remember to treat the patient as well as the disease. This work is pecu-

liarly qualified to awaken the physician to his other duties to his patients, other duties than the almost mechanical investigation and treatment of diseased tissues and organs. There is no one who could not benefit by and derive inspiration from a reading of this little work, and the reviewer takes especial pleasure in giving it his unqualified recommendation. G. H. T.

Talks on Obstetrics. By Rae T. La Vake. St. Louis: Mosby. 1917.

This little volume is precisely what its author designs it to be—"Neither a textbook nor compend" of obstetrics, but a discussion of the most important problems giving a perspective that is extremely valuable to the student or the physician of limited obstetrical vision. Another point which the book attains is an attempt to eradicate individual faddism and to make procedures so rational and conservative as to become standardized. Under the first chapter on sepsis many important points with regard to prenatal care are brought forward. The subjects of the importance of rectal examination; technic of preparation and after care; and the technic of delivery are well covered. The recent view of the part played by foci of infection is given deserved consideration, and the treatment is most widely accepted by obstetricians. The salient points in eclampsia are presented and most suggestive theories are touched upon. The procedures are most sound. Under hemorrhage, the author has in a few pages given a most complete exposition of differential diagnosis and practice, and no point is missed in the prophylaxis of abortion. The prevailing view on the subject of Cesarean section and therapeutic abortion is maintained. The use of forceps when actually indicated and according to established rules cannot be too rigidly insisted upon. Version is favored rather more than the accepted tenet but one is warned against withdrawing the hand once introduced until the course of procedure is clear. The author's rules in obstetrics are all well worth adoption as a part of the creed of obstetricians. L. T.

Manual No. 2. Notes for Army Medical Officers. Edited by Lt.-Col. T. H. Goodwin, R. A. M. C., deals with the subject of Organization and Administration, War Surgery, Sanitation in War, and Notes for service on the Western Front. It takes up the subject of medical units and their relations to other branches of the service, Casualty Clearing Stations, Hospitals, Medical and Surgical Equipment, the wastage of War, Battle Casualties and many other topics of essential interest to the Army surgeon. It considers collapse and shock and the various treatments of wounds. It considers and illustrates the splints used; in fact, all that the Medical Officer should know in the War Zone. It is the result of the experience of our Medical Allies and represents the best guide for our own profession at the front. It is to be most heartily recommended. Publishers, Lea & Febiger, Philadelphia, Pa.
S. T. P.

Manual No. 3. Military Ophthalmics Surgery. By Greenwood, De Schweinitz and Parker. This little book deals with the various injuries which may affect the eyes in war times and their methods of treatment. It gives a full list of instruments necessary in the equipment of the eye surgeon. It also deals with infectious diseases of the eye and contains an interesting chapter on the examination of malingerers. This latter will undoubtedly be useful to examining boards as well as to the surgeon who is confronted by reconstructive problems. Publishers, Lea & Febiger, Philadelphia, Pa. S. T. P.

American Addresses on War Surgery. By Sir Berkeley Moynihan, C. B., Temporary Colonel, A. M. S., Consulting Surgeon, Northern Command. 12mo. of 143 pages. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $1.75 net.

This little book contains five papers read in America in October and November, 1917: Causes of the War, Gunshot Wounds and Their Treatment, Wounds of the Knee-joint, Injuries to the Peripheral Nerves, and Wounds of the Lungs and Pleura. It is written with an easy simplicity and a clinical logic that mark the English master. The chapters on wound treatment and on wounds of the knee are admirable. They give the essence of what three years of war and the sacrifice of numberless lives have evolved. Moynihan lays more weight on an early, careful and complete excision of contaminated wounds than on the various kinds of antisepsis;—of the Carrel-Dakin method he says: "In times of leisure the method is good; in times of war, with all the haste of war, it will often fail." He praises Wright's hypertonic salt packs and irrigations. The chapter on wounds of the knee gives clear indications for the different methods of treatment and decries the placing of drains in the joint. What is in the book is Gospel; we should recommend every surgeon to study it. L. E.

Guide to Organic Drugs. Ninth revision U. S. Pharmacopoeia. Third revision of National Formulary. Compiled and arranged by John S. Wright. Leather. Indianapolis: Eli Lilly & Co. 1917. Price 25c.

This is a handy little vest-pocket guide based on the third revision of the National Formulary. It contains in addition to a glossary of botanical and therapeutical terms, a conspectus of plant families and other information of pharmacological interest. L. E.

American Illustrated Medical Dictionary (Dorland). A new and complete Dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with new and elaborate tables. Ninth edition revised and enlarged. Edited by W. A. Newman Dorland, M. D. Large octavo of 1179 pages with 331 illustrations, 119 in colors. Containing over 2000 new terms. Philadelphia and London: W. B. Saunders Company, 1917. Flexible leather, $5.00 net; thumb index, $5.50 net.

This is a very convenient desk Dictionary containing the latest medical scientific definitions in conjunction with considerable information on subjects of medical, physiological and anatomical and surgical interest.

It is bound in limp leather, very convenient in size and weight, and is to be highly recommended as a vade mecum of the practicing physician.

As a sample of its modernness we append the following words:

War Words.

ambrine	Leclainche-Vallée serum
brassard	réforme
brilliant green	tolamine
chloramine-T	trypaflavine
chlorazene	trench back
flavine	trench foot
javellization	

State Society

THE DEL MONTE MEETING.

About three hundred members were present at the annual meeting of the Medical Society of the State of California at Del Monte. The following officers were elected:

President, Dr. C. Van Zwalenburg, of Riverside; first vice-president, John H. Graves, of San Francisco; second vice-president, Dr. Ferdinand Stabel, of Redding; secretary, Dr. Saxton Pope.

One of the most important events of the meeting was the address by Major Jump, who is touring the United States in order to increase the enrollment of physicians in the M. O. R. C. and the U. S. Army. The quota from California during the coming year will call for nearly 400 physicians, and every man should question his own conscience to determine whether or not he should be one of this number.

The Constitution and By-Laws underwent some revision. Changes were necessitated to meet the altered conditions of the times and the new designs of the Council. The constitutional amendments were laid on the table until the next session, and the amendments to the by-laws were passed by large majority. One of the chief features of the changes in the latter was the elimination of all standing committees and the strengthening of the executive capacity of the Council and the Publicity Bureau. It is hoped by this means to establish a more effective working unit in the Society and a co-ordination of the various elements of the organization.

Another important act of the House of Delegates was the adoption of a resolution of the Council which exempts all men in active military service from Society dues and carries these men in full membership until discharged from duty.

The House of Delegates also voted in favor of a special war tax to cover the deficit of this loss of membership, and the Secretary was instructed to collect this tax of $2.00 at the end of this present fiscal year. This is one of the legal assessments of the Society and must be made as faithfully as the usual State dues. Notice of this will be sent to each member later on.

A special feature in this State meeting was the offering of the Barbat prize and a committee was appointed by the Council to award this recognition for scientific work.

On the whole the meeting was one of vital importance in the way of organization, of very high scientific standard and adjourned in complete harmony.

NOTICE.

At the One Hundred and First Meeting of the Council of the Medical Society of the State of California, held at Hotel Del Monte, Monday evening, April 15, 1918, at 8:30 o'clock, on motion of Parkinson, seconded by Yates, it was unanimously

Resolved, That a notice appear in the next issue of the Journal, calling the attention of members who desire their special lines of practice included in the Roster, to send the desired information to the State Secretary before the 10th of May.

County Societies

ALAMEDA COUNTY.

The following program was presented at the regular monthly meeting of the Alameda County Medical Association held Monday evening, March 18, 1918:

1. The Treatment of Warts—A Series of One Hundred Cases. Dr. M. L. Emerson.
2. Differential Roentgen Interpretation of Lesions of the Digestive System. Mr. P. L. Ansell.

Both papers were very interesting and were discussed by a number, including Doctors Edith Brownsill, Kate Van Orden, F. M. Loomis, M. L. Emerson and O. D. Hamlin.

Contracts have been let by the Board of Supervisors of Alameda County for the erection of a two-story nurses' cottage at the Alameda County Hospital at a cost of $21,000. There will be an assembly room, library, kitchenette, head nurse's suite, two single and seven double bedrooms and five sleeping porches, laundry and trunk room.

Steam heat will be supplied each room from the main plant on the infirmary ground. The building is designed to comply with all the requirements of the State Bureau for buildings of this character.

Dr. P. E. Dolan of Livermore and Dr. H. A. Makinson of Oakland have both been called to the colors. Dr. Dolan is at Camp Kearny and Dr. Makinson at Camp Fremont. Dr. Milton H. Schultz has entered the Navy and is stationed at Yerba Buena. Major Stanley F. Berry has been down from Camp Lewis shaking hands with old friends.

The Alameda County Psychopathic Association held an open meeting Friday evening, April 5th.

Subject: "Care and commitment of Insane."

Speakers—Judge Chas. E. Snook, "Some Judicial Aspects"; Dr. Glenn E. Myers, "Some Medical Aspects"; Mr. Philip Carey, "Some Legal Aspects."

LOS ANGELES COUNTY.

Meeting of Los Angeles County Medical Association, March 7, 1918.

The president, Dr. Wm. Duffield, spoke about the excessive expenses of the Society for 1917 as shown by the Bulletin. He strongly urged that every member speak to his colleagues, who are not members, to join the society and thus make up the deficit. One hundred new members would wipe out our indebtedness. He gave an instance how a young practitioner was not appointed an officer because he lacked the prestige that goes with membership in the Society.

The Society's Telephone Exchange, he declared a splendid institution, although formerly he did not think so; be sure to make use of it.

Send names of those entitled to stars on the service banner to Dr. Nannie Dunsmore. Ask your soldier colleagues for letters relating to their experiences and duties in the service abroad.

The appointed committees are expected to do the work appertaining to their respective committees. Reunions of the officers and committeemen at a dinner several times a year will be continued.

Apropos the Receiving Hospital Committee, the president mentioned Drs. Haynes and Lobingier have taken hold of that work.

Woman Doctor to go to France.

Dr. Margaret Withey Farwell of Los Angeles has left for New York for preliminary preparation with settlement workers before sailing for France as a member of the Red Cross. She will be assigned to civilian relief work among women and children refugees in France. Dr. Farwell is a graduate and member of the faculty of the University of Southern California, and also has charge of the medical department of the Parent-Teachers' clinic. She was assistant house physician at the Santa Fe hospital.

To Fort Riley.

Lieutenant Geo. L. A. Hamilton has left for Fort Riley, Kan., to begin a three months' course in special military training. The last six months he has been at the base hospital at Camp Kearny at Linda Vista. He has been in the service since last September.

Public Health.

"Public Health" is a monthly bulletin of the Los Angeles City Health Department, published under direction of L. M. Powers, M. D., Health Commissioner. The January number contains a comparison of birth and death rates for 1915-16-17, monthly report for December, calendar for year's report, rules and regulations for the control and suppression of venereal diseases.

Accompanying are a set of resolutions passed by the Municipal League of Los Angeles urging every physician to cooperate with health authorities.

Spook Found Guilty.

Professor "Rollie" Jamison, arrested by police of the license squad for violating the city license ordinance, was found guilty in the police court March 13. He is said by the police to have a large acquaintance among influential spooks. Working behind a black screen, he told Sergeant McPhillips of the squad many interesting things about a brother that McPhillips didn't know he had.

One Hundred and Fifty Los Angeles Surgeons and Nurses Called for War Work.

Junior surgeons and hospital attendants, comprising the enlisted personnel of the army base hospital unit No. 35, entrained March 14th for Camp Kearny, to undergo a course of preliminary hospital training. Lieut. Frederick S. Ray, M. R. C., acting adjutant, took the unit to the camp. The staff of surgeons, composed of thirty-five graduate doctors are not to go until the unit is ready for service.

Life Endangered by Interrupted Operations.

Los Angeles was in darkness for nearly an hour about 7 p. m. on March 13, owing to the power being shut off by strikers. Business was delayed, social functions prevented, theaters inconvenienced, surgical operations in several cases hung poised in the midst of delicate life and death operations.

Former Los Angeles Physician is Ordered Interned.

Dr. Frederick Hiller has been ordered interned as a dangerous alien enemy. Together with twenty-two others, he will be taken south. He admitted communicating with Germany through Switzerland, employing invisible ink, and had planned to return to Germany under the alias of John Ferrari. He formerly practiced medicine and manufactured a food product in Los Angeles. His wife is said to be living in Seattle.

Physicians Entertained.

Mrs. Eva Cramer Bresler entertained March 14 in honor of the physicians in the base hospital at San Pedro. Among those present were Capt. W. Kelly, Lieuts. A. W. Clark, Best J. Thompson, W. Blackard and E. W. Walker; Patrick and Terrence Casey, J. L. Hamilton and C. A. Lenzen, U. S. N.

Modern Surgery of War.

The Santa Monica-Ocean Park Chamber of Commerce had two hundred members and guests listen to Dr. Andrew Stewart Lobingier on "Modern Surgery in the War and German Propaganda" at a banquet in the Merritt-Jones Hotel on March 18.

Christian Science Board Answers Critic's Attack.

Resolutions adopted at the Bible Institute to bar Christian Scientists as army chaplains were answered by Henry Van Arsdale, chairman of the Los Angeles Christian Science Committee on Publication. He says that reasons assigned in the resolution, that Christian Science denies the reality of ills of the flesh, and that it opposes the fundamentals of Christianity, are due to misconception and untruth. Pain and suffering, he says, are perhaps the most real things in human experience, but obviously being no part of the Divine. Christian Science teaches that they do not possess the quality of eternality or of perfection.

Dr. Woodroffe in France.

Dr. Helen Woodroffe, former secretary of the Santa Monica Bay Red Cross Chapter, who now is in Paris for the society, writes to the Santa Monica Chapter that at her hotel the concierge walks with a limp, and has the lapels of his coat covered with medals. The head waiter walks decidedly lame. Another blessé was hobbling about on a frame work with both feet amputated just a little above his ankles. The blind are learning to typewrite, read, make bead ornaments, rugs, etc.

Signal System Wanted.

Dr. L. M. Powers, city health commissioner, has asked the council for an appropriation of $100 to install a warning signal system on the stockade around the Los Feliz hospital. The signal system is intended to prevent escapes of inmates.

Wanted Fourth Assistant Superintendent of Charities in Charge and Superintendent of Sylmar Sanatorium at a Salary of $225 Per Month and Full Maintenance.

Secretary F. E. Doty of the Los Angeles County Civil Service Commission announces that the examination for above position will take place Wednesday, May 15, 1918, 8:30 a. m., Room 1007 Hall of Records, Los Angeles, and in the office of the San Francisco Civil Service Commission, San Francisco. After one year the salary is to be advanced to $250 per month and full maintenance, and in addition there may be provided an unfurnished cottage with water, light, heat and house laundry. Under direction of the Superintendent of Los Angeles County Hospital, the superintendent of the Sylmar Sanatorium is to reside at the sanatorium and is to devote his or her entire time to the duties of the position. The position calls for specialization in the treatment of tuberculosis. Application of physicians and surgeons with special knowledge of tuberculosis can be made on blank forms sent by request to be filed three days prior to examination.

Dr. Leach Lectures to Boys in France.

Dr. Chas. N. Leach, first lieutenant in the medical reserve corps of the American Red Cross, military camp No. 1, sent as a souvenir a German trench helmet, taken from a prisoner, to his father, W. N. Leach of Inglewood. The helmet, with the mud of Flanders adhering, reached Los Angeles March 30. Lieutenant Leach is lecturing to soldiers three times a week. His service in Belgium gave him an insight into the German character and military machine so that his talks were of unusual interest to the boys.

Chinese Doctor in Jail on Drug Charge.

Dr. H. Ching, herbalist, and his clerk, Harry Knox, were lodged in the county jail March 30 by Dr. C. W. Montgomery, Federal narcotic agent, on a charge of violating the Harrison narcotic act. Twenty men, said to have been caught in Dr. Ching's establishment, were released when it was found that they were employed at a Pacific shipbuilding plant. They are said to be drug addicts.

Dr. Marxmiller Says Teuton Captives Are Sickly.

Dr. Harry Marxmiller of Los Angeles, serving in the British army medical corps, in a letter to E. G. Judah, chairman of the war donations board, asserts that German war prisoners are a sickly looking lot, ready to quit if they were given the opportunity. The doctor says that the folks at home can never know the hardships that are undergone by the men at the front. The Red Cross and the Y. M. C. A. are making the rough road a lot easier to travel. Tell the people of Los Angeles they can give until it hurts and then some more, and they will not be doing half their duty by the men who are cheerfully giving their lives in democracy's cause. Dr. Marxmiller expects to be transferred to an American unit this month. He appeals for greater support in Los Angeles of the third Liberty loan.

(Continued from last issue.)

Dr. Charles L. Allen dwelt on the neurological aspect of head injuries.

The importance of an injury to the head depends almost entirely upon to what extent the brain is involved. In all cases it is necessary to thoroughly study the symptoms from the medical point of view, but particularly is this important in the case of people picked up on the street with or without evidence of head trauma since, though the patient may have fallen and injured his head, loss of consciousness may be due to some other cause, such as alcoholism, opium poisoning, uremic or diabetic coma and organic disease of the brain.

Focal symptoms from the side of the nervous system are observed only when the lesion involves the motor region, the visual centers or the areas concerned in the speech mechanism, a large part of the brain consisting of the so-called silent areas, so that in many cases we have to depend exclusively upon the general symptoms of brain involvement.

An important feature of head injuries is the possibility of the onset of symptoms long after the trauma has occurred.

It is well-known that epilepsy not infrequently has its origin in injury to the brain. The so-called traumatic neuroses are very common sequelae and demand careful study to determine, if possible, how much is due to actual injury and how much to suggestive influences or to intentional simulation. It is very common to find that those who have suffered from head injuries develop great restlessness, insomnia and intolerance to alcohol, while the mental symptoms proper vary from slight confusion and irritability to entire change of character, in severe cases amounting to deep dementia. The medical treatment of brain injuries consist in measures to relieve shock when it is present, after this has passed away in confinement to bed, an ice bag to the head, non-stimulating diet, free purgation, with such sedatives as bromides and opium if needed. There should be a long period of quiet and avoidance of excitement before returning to work, and complete abstention from alcohol. Patients are frequently brought to the hospital suffering from mental aberration with the statement that years before they had suffered an injury to the head. In many of these cases it is at once evident that the alleged injury has had nothing to do with the present mental condition and it is hardly necessary to say that unless there is some direct indication for a head operation such a procedure could at this late date offer no prospect of repairing a loss of function which in the nature of things has by this time become permanent.

Dr. C. W. Rand spoke on "Minute Pathology of Brain Injuries."

He said, among other things, that the pathology is not known. That there is a disordered physiology rather than a pathology. The delicate mechanism has been upset, and as the normal condition cannot be explained neither can the pathological. He dwelt on the spinal fluid and ventricles, and the secretion and absorption of the pacchionian bodies by sinuses, venous circulation, and perilymphatic tissues, how to deal with edema after injury, for other causes than injury may give rise to edema. He spoke of the three "C's," that in **concussion** there is often no lesion found after death; that the integrity of the brain is disturbed so as to lead to unconsciousness; that **contusion** is a higher form of concussion, there being evidence of bruising: the microscope showing evidence of hemorrhage; there may be wide laceration with slight symptoms as in the "Crowbar case"; there is death if injury is in a vital spot as the tips of the temporal and bases of the frontal lobes; that it may occur at point of injury or on opposite side by contrecoup. He stated that concussion and contusion follow traumatism but **compression** does not necessarily do so; the effects are similar; there are two kinds of compression, local and general; the first may give symptoms, the latter may be without local compression; that circulatory disturbance is the chief finding; the cerebro-spinal fluid is only compressible and is driven out by encroachment from without, the blood vessels may thus be encroached upon so that empty arteries result in anemia.

Discussion was led by Drs. Lobingier, Dudley, Brainerd and Hill.

Meeting of February 21, 1918.

Dr. Dufficld presiding.

Dr. Henry W. Howard presented resolutions in honor of the late Dr. Henry N. Stehman, which were unanimously adopted.

Dr. Edward Avery Newton proposed that the ranks for the medical corps be advanced higher than Major. The plan was endorsed by the Society.

A "Case Report on Polycythemia," by Dr. Chas. L. Allen.

Dr. Charles L. Allen reported the case of an imbecile with polycythemia and symptoms of polyglandular disease.

This man, now 40 years old, had been mentally defective from birth, and was sent to the Psychopathic Hospital on account of antisocial tendencies and inability to take care of himself. He at once impresses one by the deep bluish red of his complexion, by his coarse, heavy features and by the great enlargement of his thyroid gland. The shape of his face and of his thorax is somewhat suggestive of actromegaly, but there is no enlargement of his extremities. A blood count showed erythrocytes on one occasion 9,025,000, on another 8,500,000, leucocytes 9,500. It was suggested that the polycythemia might be connected directly with a perversion of the function of the endocrine glands, since it is known that an excessive action of the thyroid stimulates the adrenal secretion and there is certain experimental evidence to show that in some animals at least, the injection of adrenalin produces a temporary polycythemia.

Dr. R. Wernik's subject was: "The importance to the Physician, Obstetrician and Surgeon of the Chemical Analysis of the Blood for Urea, Creatinin, Uric Acid, Sugar and Carbon Dioxide tension."

"Qui bene Diagnoscat, bene curat."

Blood chemical analysis is of the utmost importance in the diagnosis and prognosis of diseases affecting the kidneys and in diabetes. These micro-chemical methods of blood analysis for urea, uric acid, creatinin, sugar and carbon dioxide tension of the blood, have been so simplified that any physician who will devote the necessary time and attention to these methods can make his own tests.

We can tell by estimating the carbon dioxide tension of the blood, the amount of acidosis present. This is Van Slyke's method and more accurate but not so simple as the Frederici apparatus for measuring the carbon dioxide tension of the alveolar air which is quite accurate except in conditions of congestions of the lungs.

Carbon dioxide tension in the blood or alveolar air means acidosis. In cases of diabetes mainly due to acetone and diabetic acids, in cases of nephritis due to the inability of the kidneys to climinate acid phosphates. This acidosis in nephritis has been recognized by the writer for the past thirty years from the fact that in all cases of nephritis he found volatile ammonia present in the freshly passed urine, which could only mean that on account of a deficient alkalinity of the body fluids the cells were splitting up the nitrogen so as to furnish ammonia to neutralize the existing acidosis. It is for this reason that he has for so many years practiced and urged high retension alkaline enemas in the treatment of nephritis.

In diabetes only a blood test will show whether or not the patient is sugar free. Any sugar over 0.15 in 100cc of blood in a diabetic on a diet means

hyperglycemia whether or not there is sugar in the urine.

The obstetrician and surgeon, and frequently he is the better surgeon who knows when not to operate, can only derive benefit for themselves and their patients by having these tests made, as frequently there is an existing nephritis without albumin, casts of edema. On the other hand an apparently hopeless case, the urine containing large amounts of all albumin and numerous casts may be safely operated on if the blood examination shows that the kidney filter is only slightly impaired.

"Medical Legal Status of the Roentgenologist," by Dr. Albert Soiland.

This paper deals with the legal problems confronting the roentgenologist. The present unsatisfactory conditions which prevail whereby it is possible to serve a subpoena upon the busy practitioner, and compel him to leave whatever business he may be engaged in to spend the larger part of a busy day at court, testifying in some trivial damage case. Most of the cases quoted are of the ambulance-chasing variety, where the wily lawyer attempts for the fee of $2.00 to get expert testimony. Failing to do so, he usually makes it very annoying for the doctor and consumes much more of his time than is necessary.

The object of this paper is to seek a remedy by changing the present antiquated laws, which permit of this injustice to medical roentgenologists in particular. It is the writer's belief that all Roentgen plates are the property of the roentgenologist, and that the latter is obliged to furnish a written report, a reprint, or a copy of the findings to the physician referring the case, who may also specify that the patient is to receive a copy.

The last subject of the evening was: "Case Report—The Birth of the Literary Infant—Watch Your Weight," by Dr. Lulu W. Peters.

The president, Dr. Duffield introduced Dr. Peters as the Chairman of the Public Health of California Federation of Women's Clubs, and commented upon her good work in health lectures and helping to raise the standard of milk, all without remuneration.

Dr. Peters reviewed with the medical audience her book entitled "Watch Your Weight," "Diet and Health with Key to the Calories." The book was distributed among the doctors, who secured copies. Attention of the meeting was called to the many points of interest, especially to the "Medical Trust" which Dr. Peters defined as a trust of education, the minimum standard of which consists of eleven years of training after the grammar grades, and that the League of Medical Freedom is really the league of medical ignorance. Dr. Duffield mentioned that the book could be obtained at any book store for 25c and that all physicians should stand behind Dr. Peters to push this propaganda.

Drs. Witherbee, Coe and others discussed the subjects.

MENDOCINO COUNTY.

Mendocino County Medical Society.

A regular meeting was held at Albion on March 30th in the office of Dr. Arthur C. Huntley. The meeting was called to order by the Vice-President, Dr. Carol L. Sweet. Present, Drs. C. L. Sweet, Arthur C. Huntley, F. C. Peirsol, Harper Peddicord and O. H. Beckman. Only one delinquent was reported by the Secretary. The Secretary was instructed to officially inform our Senators and Representatives in Congress that this Society urges them to actively support the bills for increase in the rank and percentage of physicians in the Medical Reserve Corps of the Army. In the scientific program each doctor made a short presentation of his subject for discussion. Dr. Huntley, "A Lame Back"; Dr. Peddicord, "Bronchial Cough"; Dr. Sweet, "Wounds in General"; Dr. Beckman, "Herpes as a Symptom"; Dr. Peirsol, "Disease of Delinquency in the Payment of Doctor Bills." It was discussed in both its sporadic and epidemic form and was agreed it was one of the most dangerous of infectious diseases.

News About Medical Volunteers.

Assistant Surgeon R. H. Hunt, U. S. N. R. F., is on active duty on board the U. S. S. "Moccasin." Lieut. H. H. Wolfe is still at Allentown, Pa., Lieut. Raymond A. Babcock is very likely busy at the Presbyterian Hospital, Chicago, Dr. H. O. Cleland is ready for orders to active duty.

ORANGE COUNTY.

At the February meeting of the Orange County Medical Society, Dr. R. A. Cushman of Santa Ana read an interesting paper on "Meningitis." He reported several cases which have occurred in his own practice, and Dr. Zaiser, superintendent of the Orange County Hospital, added his reports of several cases which have come under his observation at the county institution. The value of spinal puncture as an aid to diagnosis and the use of Flexner's serum were ably brought out by the essayist and those who took part in the discussion.

The service flag of four stars was unfurled and now decorates the walls of the Society's rooms.

Captain W. Harold Wickett of Anaheim has been ordered to the Mayo Clinic at Rochester, Minn., for two months' instruction in military surgery.

The Society was favored at the March meeting by having as its guest Dr. A. S. Lobingier of Los Angeles, who gave an interesting evening on "The Diseases of the Liver and Bile Ducts." The lecture was illustrated by several colored drawings and was comprehensive. The doctor laid special stress on the necessity of an intimate knowledge of the physiology of the liver and its secretion in order to acquire a good understanding of the pathology. While he believed in cholecystectomy as being a sound surgical procedure, he believed that the surgeon should be conservative and should perform the operation only when there is a definite pathology to warrant it. At the close of the meeting a banquet was served at James' Cafe.

Dr. D. C. Balfour of the Mayo Clinic has been the guest of Dr. H. A. Johnston of Anaheim, recently.

The Fullerton Hospital has been operating for about three months and is enjoying a liberal patronage.

The regular meeting of the Orange County Medical Society was held at Santa Ana on April 2nd, about twenty members of the society being present.

The committee on publicity reported having had printed in the Santa Ana Daily Register a copy of an article by Dr. W. W. Keen. The expense of same was borne partly by individual members of the society and partly by the society as a whole.

The paper of the evening, entitled "Calcareous Degeneration of the Thyroid," with the exhibition of a large specimen, was read by Dr. H. A. Johnston of Anaheim.

The officers elected for the ensuing year are: President, Dr. H. E. Zaiser; vice-president, Dr. G. M. Tralle; secretary, Dr. W. C. Dubois; treasurer, Dr. H. S. Gordon; librarian, Dr. C. D. Ball.

Several members signified their intention of attending the state meeting.

SACRAMENTO COUNTY.

The Fiftieth Anniversary Banquet of the Sacramento Society for Medical Improvement was held at the Hotel Sacramento Saturday evening, March 16th.

It was just fifty years ago, March 17th, 1868, that this Society was organized. The first officers of the

Society were: President, Dr. Hatch; Secretary, Dr. Cluness. Dr. Cluness, now residing in Alameda, is the only surviving charter member of this organization.

The Toastmaster was Captain James H. Parkinson, M. R. C., while Dr. J. Wilson Shields, M. R. C., of San Francisco, delivered the address of the evening.

Dr. J. R. Snyder has recently been ordered to report for duty at the Letterman General Hospital.

Dr. S. E. Simmons has been critically ill with lobar pneumonia, but is now convalescent.

Dr. W. J. Hanna, who was formerly Major in the National Guard, and served in the recent Mexican expedition, has been appointed City Health Officer by Dr. G. C. Simmons.

SAN DIEGO COUNTY.

The last meeting of the County Society, March 23rd, was a complimentary dinner to some of the ranking officers at Camp Kearny, and was entertainingly addressed by Lieut. Col. Alex. Murray, chief surgeon at Camp Kearny, and Major J. W. Moss, on duty at the base hospital. These gentlemen spoke with authority of the duties, responsibilities and opportunities for the medical man of the army service.

Articles of unusual merit presented at recent meetings of the society were by Dr. P. M. Carrington on "The Indigent Tubercular," and that by Dr. A. J. Thornton on "The Physician in the Public Schools."

Captain F. J. Grant left this week for Long Island as medical examiner in the aviation department of the army.

Dr. C. M. Hosmer, commissioned as junior lieutenant, is on duty at the naval training camp, San Diego.

Dr. Otto G. Marsh, also junior lieutenant in the navy, left for a northern port on the 6th of April.

The San Diego Diagnostic Group Clinic by reason of the inroads made by the war upon its staff has temporarily suspended and turned over its building to Medical Advisory Board No. 2, State of California.

The San Diego County Society is planning to entertain the spring meeting of the Southern California Medical Society the latter part of May.

Dr. Geo. B. Worthington has received his commission as captain in the army.

From the San Diego County Bulletin.

When the democracy of the future shall have been achieved, children will not be fed into the system of education, however admirable it may be in itself, without regard to their individual aptitudes and citizen-making capacity. We will no longer boast that we have given them all an equal chance by treating them as billits of pig iron. The sky line of their personality will have been accurately surveyed, the contour lines of their endowments will have been plotted, and their education will have been fitted to them as individuals in light of their future service to themselves and to society. Then will the State receive the loyalty now only hoped for in the dreams of the dreamer, for they will be the State.

PROCEEDINGS OF THE SAN FRANCISCO COUNTY MEDICAL SOCIETY.

During the month of March, 1918, the following meetings were held in the rooms of the Society, corner of Bush and Hyde streets, San Francisco:

Section on Medicine—Tuesday, March 5th.

1. Report of case of gangrene of the foot. S. A. Goldman.
2. A case of osteitis deformans. H. D'Arcy Power.

General Meeting—Tuesday, March 12th.

1. Report of case showing ill effect of drugs before operation. W. P. Willard.
2. Intestinal obstruction following Caesarean section. R. Knight Smith.
3. Report of radical operation, and exhibition of specimens of diverticula of the bladder. Frank Hinman.
4. Skull cases, with demonstration of patients. Leo Eloesser.
5. Pulmonary tuberculosis as a factor in the National Army. Philip King Brown.

Children's Hospital Clinical Evening—Tuesday, March 19th.

1. Treatment of fractures of lower end of the humerus; demonstration of cases. E. K. Willits and M. I. Judell.
2. The care of contagion in hospital. W. E. Musgrave.
3. The hydrostatic reposition method of Hirschsprung in acute intussusception. Its use together with laparotomy. Langley Porter.
4. Hematocele in pelvis, not of extra-uterine origin. A. J. Lartigau.

Mary's Help Hospital Clinical Evening—Tuesday, March 26th.

1. Demonstration of eye cases. M. W. Fredrick and P. de Obarrio.
2. Hipjoint disease; illustrated with X-ray plates. C. C. Crane.
3. Statistics from the Maternity Department of Mary's Help Hospital for the year 1917. T. D. Maher.
4. Cataract extraction. M. W. Fredrick.
5. Two cases of megacolon. Illustrated by lantern slides. A. S. Keenan.
6. Radiograms of gastro-intestinal cases. P. H. Luttrell and J. J. Blach.

TULARE COUNTY.

Regular monthly meeting was held at Visalia April 3, 1918. Discussion was had regarding the establishment of the proposed tuberculosis sanitarium for Kings and Tulare counties at Springville, where the county has recently purchased a desirable site. Drs. Melvin, White and Preston were appointed a committee to represent this society in a conference with the County Supervisors and a representative of the State Board of Health to co-operate in establishing an efficient and satisfactory institution.

The matter of improvements, present and proposed, at the County Hospital were also discussed.

Dr. Nauss, District Health Officer, from Fresno, presented a paper setting forth the provisions of the enabling act whereby health districts of convenient size might be incorporated and maintained for the effective and thorough control of health conditions in all communities desiring them..

The prevalence of an unusually extensive and severe epidemic of measles throughout the county, presenting many uncommon sequelae, was a topic of general conversation by all who were present.

Correspondence

PHYSICIAN WANTED.

Santa Rosa, Cal., February 18, 1918.

To the Editor:

Rev. C. W. Baker, Missionary at Orleans, in the northern part of Humboldt County, has written me, asking if it is possible to secure a physician for that community, the nearest physician being twenty or thirty miles away on the Hoopa Indian Reservation, and is not thought very highly of.

They have secured a monthly subscription list of $50.00, and the adjacent community, namely, the Forks of the Salmon, have promised to do as well, but Mr. Baker thought that about $25.00 was about all that could be expected from there. They feel sure the county would aid in the pay of

the physician, and they are trying to secure help from the Government.

If you could give this request publicity in your journal, it would be appreciated.

Yours very truly,

ALLEN F. GILLIHAN, M. D., Santa Rosa,
District Health Officer, North Coast District.

Military News

IMPORTANT PARCEL POST NOTICE.

The attention of the public is called to the fact that every pound and every ton of parcel post which is sent from the United States, but which can be bought by the soldiers in France, forces off the ships, ammunition and other needed war materials. The immense volume of parcel post sent to France containing articles which can be purchased cheaply by the soldiers in France, and which are not usually shipped from the United States but are obtained in Europe, principally from Spain, Switzerland, and Italy, is shown by the fact that an investigation of 6000 sacks of parcel post disclosed 3874 pounds of candy, 1332 pounds of chocolate, 1327 cakes and 2838 packages of chewing gum.

During the month of February the volume of parcel post sent to the troops in France occupied 120,000 cubic feet of space on the ships. This would be a slice of cargo space 600 feet long, 20 feet wide, and 10 feet high. The demand on tonnage of the railroads in France is so great that it frequently requires days before enough cars can be furnished to move the mail from the port to the interior of France. The number of soldiers is to be greatly increased and the amount of mail and war material will increase accordingly, and to meet this condition urgent suggestions are being made to reduce the size of parcel-post packages and to eliminate a large quantity of parcel post. In view of this situation, it becomes the patriotic duty of the people in this country not to send to the soldiers in France eatables or any other character of articles which can be bought from the Army or the numerous recreation centers that are established wherever troops are encamped.

In the way of smokes, there are twenty-two varieties of cigarettes, from Pall Mall to Sweet Caporal.

There are seven varieties of jams, besides seven kinds of soft drinks, from grape juice to tea.

The list of things which the boys in France can purchase at these recreation centers may be summarized as follows:

Biscuits, books, brushes, bouillon, candies, candles, canned goods, holiday cards, chewing gum, chocolate, cigarettes, cigars, combs, dental creams, various soft drinks, flashlights, fruit, handkerchiefs, heaters, jam, knives, leather goods, malted milk, condensed milk, evaporated milk, mirrors, nuts, pencils, pipes, razors, shoe polish, shoe laces, soap, sponges, tobacco, towels, and woolen gloves.

SERVICE TO MEN EN ROUTE.

Every transport carrying American soldiers abroad is to have on board representatives of the home-service section of the Red Cross to look after the comfort of the departing men.

These home-service men will have a two-fold opportunity and duty: First, to learn, by personal conference, the anxieties of the soldiers on board and to forward knowledge of these to our department, and, secondly, to send communications from the man in the service to his family. The soldiers in the camp are not told very long in advance that they are to go abroad, as this is not wise from a military standpoint. The men have very little time to communicate with their families and friends before leaving. If on the voyage there is some one with whom they can talk over family matters and by whom they can send word to their families they will travel with lighter hearts and be ready to give the Red Cross opportunities to help.

At the request of the United States Army the American Red Cross has just arranged to install with all American troops now engaged in actually fighting the Germans a special front-line service. This is a development of the front-line canteens, through which the American Red Cross has during the past six months served more than 1,000,000 French poilus with hot drinks and, above all else, a friendly boost right up in or near the trenches themselves.

Today the Red Cross has fifteen rolling canteens behind the lines. From these canteens are sent forward daily, often in the small hours of the night, fifty or more large receptacles containing hot drinks. These are served free to the men going on or just coming off duty. The work has proved itself to be of such value to the French that the American Army has asked the Red Cross to have this service directly in touch with the medical relief stations nearest the front. The work is often done under heavy shell fire and requires men of great bravery and sympathy.

VOLUNTEER MEDICAL SERVICE CORPS.

Dr. Franklin Martin, chairman of the general medical board of the Council of National Defense, has appointed the following committee of the general medical board which will constitute a central governing board to handle the general administration of the Volunteer Medical Service Corps: Dr. Edward P. Davis, Philadelphia, president; Dr. Henry H. Sherk, Pasadena, vice-president; Dr. John D. McLean, Philadelphia, acting secretary; Dr. Edward H. Bradford, Boston; Dr. Truman W. Brophy, Chicago; Dr. Duncan Eve, Nashville; and Dr. William Duffield Robinson, Philadelphia. Dr. Martin and Dr. F. F. Simpson, vice chairman of the general medical board, are members ex-officio of the new central governing board.

The Volunteer Medical Service Corps aims to enlist in the general war-winning program all reputable civilian physicians who are ineligible to the Medical Officers' Reserve Corps and who can not serve in camp, field, or base hospital because they are over 55, have slight physical infirmity, or are needed for public or institutional service.

It will be an organization of doctors at home "to do something when there is something to do" in response to calls from the Surgeon Generals of the Army, Navy, or Public Health Service, General Medical Board, Council of National Defense, or other duly authorized departments or associations.

Applications for membership may be sent to the Council of National Defense, Eighteenth and D streets, Washington, D. C.

REVIEW OF WAR SURGERY.

There has just been prepared in the office of the Surgeon General a new pamphlet Review of War Surgery and Medicine (March 1918, Vol. I, No. 1). According to the editorial note this review is to appear monthly and to be devoted to abstracts of war medical literature. This little pamphlet will furnish the medical personnel of the army abstracts of original papers of importance, necessary information in a short compass, and prompt publication of reports which otherwise might not gain circulation.

Department of Pharmacy and Chemistry

Edited by FELIX LENGFELD, Ph. D.

A. M. A. COUNCIL ON PHARMACY AND CHEMISTRY.

The report of the Council on Pharmacy and Chemistry of the American Medical Association is published regularly in the Journal of the A. M. A. and therefore need not be reprinted in this Journal. The reports are full of meat and they should be read carefully by every practitioner. A review of these columns from time to time may prove not uninteresting.

Among the products endorsed by the Council: Barbital, Chlorcosane and Procaine.

CHLORCOSANE. Chlorcosane is a solvent for Diachloramine-T. Both the label and the statement of the Council regarding Chlorcosane, though true, are misleading. The label reads "chlorinated and liquefied paraffin," and this, as well as the statement of the Council would lead the ordinary reader to assume that Chlorcosane contains available chlorine. This is not the case. A chlorine carrier, like diachloramine-T, dissolved in a paraffin oil is liable to replace some of the hydrogen in the paraffin by chlorine, at the same time forming Hydrochloric acid. If the hydrogen in the paraffin has already been replaced by chlorine, such a reaction is impossible and the solution will probably be very much more stable. Chlorcosane is simply such a paraffin in which hydrogen has been replaced by chlorine and though it contains 30 per cent. or more of chlorine, it is no more a chlorine carrier than is chloroform. It should, therefore, be borne in mind that Chlorcosane is, at best, simply an inert solvent.

BARBITAL. Barbital is the official name for Diethyl Barbituric Acid, which has been generally known under the arbitrary name of Veronal. Barbital is manufactured in this country under license from the Federal Trade Commission, but this license does not carry with it the right to use the name Veronal, which is the property of two concerns that were marketing this product before the present war. The name Barbital includes Veronal, but Barbital marketed by any but these two firms cannot be labeled Veronal. It is to be hoped that the physician will use the official name Barbital instead of Veronal. He will thus do a patriotic act and, in addition, may help to stop the present excessive use of Veronal. It has been claimed that Veronal is not a habit-forming drug, but there certainly are those who believe they cannot get sleep without the use of this drug, and some of them use it to excess. Everybody knows the name Veronal and if the physician prescribes Veronal, even if he marks his prescription not to be repeated, the patient knows what he is getting as he usually reads the prescription, and he can obtain more at the nearest drug store. If the physician will write Barbital, a name which is unfamiliar to the public, will order his prescription not to be repeated, and will use capsules instead of tablets, he can watch his patient much more closely, and if he finds it necessary to have the prescription repeated, he may substitute some sugar and milk for some of the Barbital, and thus gradually wean his patient from the use of the drug.

PROCAINE is the official name for Novocain.

In its propaganda for reform the Council calls the attention of the physician to the following: Phenalgine, Ammonal, Camphophenique, Basey Bread, Fellows Syrup, Syphilidial, Bellans and Antiphlogistine.

Phenalgine and Ammonal are not chemical individuals but mixtures whose chief medicinal ingredients is acetanilide. At present both are dead in this locality—but there is no telling what will happen when the detail man comes around again.

Camphophenique, as pointed out over ten years ago, is not composed of approximately equal parts of phenol and camphor, but consists of about one part phenol, two parts camphor and two parts paraffin oil. A similar mixture may be prepared by the druggist if the physician finds the ordinary camphorphenol escharotic. This is usually made of one part phenol and two parts camphor. A mixture of one part phenol and three camphor seems perfectly safe without any causticity.

The Council considers Fellows Syrup of the Hypophosphites an inelegant preparation not equal to Compound Syrup of Hypophosphites N. F. The hypophosphites seem to have no specific action and do not supply phosphorus to the tissues. There is no objection to the use of hypophosphites of iron, manganese, quinine, strychnine, ammonium or calcium but sulphates or chlorides are just as good.

Basey Bread, recommended as an obesity cure is Graham bread at $1.00 a loaf. With bread at $1.00 a loaf, obesity would soon be a mark of wealth and distinction, as in China.

Bellans makes more extravagant claims than even other preparations of papain, pepsin, etc., and may do harm by inducing the reader of its advertisement to overindulge in indigestible food.

Syphilidial has not yet reached us. It seems not to be what it claims to be and should be investigated carefully before using.

The Council has studied the best way of giving Bicarbonate of Soda. It recommends that the bicarbonate be dissolved in a considerable quantity of plain or carbonated water. It suggests as an improvement the addition of a little sugar and lemon juice. Of course the physician who orders bicarbonate in this way will see that an excess of soda is used but the layman is apt to overlook this and thus get a pleasant lemonade with a little citrate of soda. Perhaps the Council intended in this way to stop the indiscriminate and often injurious use of bicarbonate of soda.

SAVING GRAIN, SUGAR AND GLYCERINE.

The Pharmacopoeia Committee of Great Britain has issued a War Pharmacopoeia which thereby becomes the standard in that country. It eliminates, as far as possible, sugar, alcohol and glycerine. A similar movement has been started in this country. It was the main topic at the meeting of the Minnesota Pharmaceutical Association on February 6th, 7th and 8th. The discussion started with a paper by Mr. F. A. Upshar Smith, in which he proposes a large number of substitute formulae.

Every American must feel interested in the conservation of our grain, sugar and glycerine, but we must also conserve our man power and the material saving may be attended with such a waste of man power as to be really a loss. The formulae in the United States Pharmacopoeia and most of those in the National Formulary are the results of months of laboratory work and years of experience. The substitute formulae certainly are not better than those in use and, in most cases, are not so good. It would not be fair to the public nor to the pharmacists to take snap judgment and to adopt these formulae without a thorough test, and this would take months and perhaps years. The difficulty might be overcome by adopting the British War Pharmacopoeia, but even then, considerable work would be necessary to adapt this book to American conditions. Furthermore, there seems to be no provision of law short of Congressional interference that will permit of a substitute for the present standards. The committees meet every ten years and, their work accomplished, they dissolve. There can be no new committees then until 1920 unless Congress passes the necessary legislation creating such committees to serve at once and declaring that their work shall constitute the standards. But even could these

changes be adopted at once, it is a question whether they would be desirable. They would give rise to needless confusion and to very considerable expense on the part of the pharmacist.

It is difficult to say how much sugar, glycerine and alcohol are used in legitimate pharmacy. Sugar, undoubtedly, less than 10,000 tons. Alcohol, less than 4,000,000 gallons, and glycerine about 2,000,000 pounds. The sugar represents about one days' consumption of the United States, and if every adult in this country will use only one small piece of sugar less once a week, the saving in a year will be considerably over the 10,000 tons used in pharmacy. The alcohol is about 2 per cent. of the total amount distilled in 1916, and represents 800,000 bushels of grain, a negligible factor in a crop of over a thousand million bushels. Furthermore, the sugar and alcohol are not wasted. They are easily assimilated and undoubtedly act as food in many cases where food is needed.

Mr. Smith advocates the use of infusions, decoctions, pills and powders instead of tinctures, etc. Here we have a tremendous waste of man power. Infusions take time, they are inelegant and, as a rule, inaccurate. But the time element alone is so great that the apparent saving becomes a waste. Then, too, the comfort of the patient must be considered. A sick man should be given his medicine in as palatable a form as is possible. He can, of course, take nasty medicine, but he will not if he can help it, and often the revulsion of feeling will cause the medicine to lose some of its efficacy. This is particularly the case with children, and it, therefore, would be a mistake to eliminate altogether, the pleasant medicines now in use.

Glycerine could probably be replaced in all internal medicaments by glucose, and although it would not be strictly legal, it is probable that a proclamation to that effect issued by the Secretaries of Agriculture, Commerce and the Treasury would be accepted by all food officials.

There can be no doubt that the physician does, at times, prescribe rather more sugar and alcohol than are really necessary, but if he will watch things and use medicated waters as far as possible, it will, undoubtedly, help to conserve the resources of the country.

The Food Administration heartily endorses this movement and has sent letters to editors of medical and pharmaceutical journals asking that they use their influence to promote it. It seems probable, however, that the officials of the Food Administration have not carefully considered the main difficulty, the waste of man power when infusions, pills, powders and capsules are prescribed extemporaneously.

SALE OF EXPLOSIVES.

THE FEDERAL EXPLOSIVE ACT forbids the sale to an unlicensed person of over one ounce of an explosive or chemical that may be used in the manufacture of an explosive. The list includes nitric acid, potassium nitrate, sodium nitrates, silver nitrates and potassium permanganate. The physician can purchase one ounce nitric acid or eighty five-grain permanganate tablets but no more at one time unless he first takes out a license. Licenses may be obtained from one of the licensing officers on personal application and payment of 25 cents. The licensing officers for San Francisco are Miss Edith Burnham, Phelan Building, and Harry F. Sullivan, Humboldt Bank.

Licenses once granted are good until revoked, but a certified copy costing 25 cents must be deposited with each dealer from whom the licensee obtains supplies. Probably most physicians will be satisfied to purchase the above chemicals in small quantity as this can be done without red tape.

State Board of Health

April Meeting.

The State Board of Health met in Sacramento on April 6th, 1918. The members present were: Dr. George E. Ebright, President; Dr. F. F. Gundrum, Vice-President; Dr. Edward F. Glaser, Dr. Adelaide Brown, and Dr. W. H. Kellogg, Secretary.

The following resignations were accepted: John H. Muller, laborer, and Miss Lillian R. Jones, stenographer in the Morbidity Division. Leaves of absence were granted as follows: Miss Elizabeth N. Pack, R. N., Assistant to the Director of the Bureau of Registration of Nurses; Mrs. Berenice Perrett, stenographer in the Bureau of Foods and Drugs, and Miss Marian Lynne, Social Service Director in the Bureau of Venereal Diseases.

The following appointments were made: Rodney F. Atsatt as Inspector to assist in the mosquito and malarial survey; Miss Lillian M. Hall, as part-time stenographer; Miss Sarah Goldstine, as general clerk in the Morbidity Statistics Division; Victor Burke as part-time bacteriologist for the purpose of analyzing milk from wagons supplying Camp Fremont, and Miss Blanche Folsom, temporarily as assistant to the director of the Bureau of Registration of Nurses.

A communication was read from Dr. D. W. Montgomery of San Francisco suggesting the conservation of lard by the use of petrolatum in its stead in the manufacture of pharmaceutical products. It appeared that a very definite saving of fat would result in the following out of this suggestion, and it was the sense of the Board that physicians should aid in its conservation by the acceptance of the substitute in such products as zinc oxide ointment.

Dr. W. C. Billings of the United States Public Health Service, and Medical Officer in charge of the plague eradicative work in California, appeared at the meeting and stated that he had received word from the Surgeon-General that the Government's appropriation for this work in California would be reduced on May 1st to a sum which would practically mean the discontinuance of this work unless the State saw fit to replace the loss by a special appropriation.

The Director of the Bureau of Registration of Nurses presented an outline of changes to be made in the schedule of studies required in training schools for nurses. The demands of the army for nurses are such as to make it absolutely necessary that all means possible be adopted to facilitate the training of nurses and increase the output of schools for nursing. The requirement adopted in April, 1916, providing that applicants must present evidence of having completed a four-year course in an accredited high school, or other institution of standard secondary grade, was modified so that the theoretical preparatory course may be obtained in an accredited college, junior college, high school or in a private school of approved secondary standing or in a school of nursing, and that this portion of the course must include the required subjects of chemistry, one unit, biology and physiology, one unit, nutrition and cookery, one to two units. This preparatory training will carry a weight of six months' credit on the three-year course. The professional training, however, must be obtained in an accredited hospital or hospitals or institution for the care of the sick approved by the State Board of Health, and shall consist of experience in medical, surgical, obstetrical patients and of sick children. It was further decided that graduates with a degree of a recognized university will be given credit of one year.

A large number of successful contestants in the recent examination for the title of "Registered

Nurse" was presented by the Director. By resolution the title was conferred upon them.

A resolution was passed to the effect that the Board of Health recognize the right of women to compete with men in any examination for State District Health Officer which may be held.

Dr. Irvine, Director of the Bureau of Venereal Diseases, made his last appearance before the Board, presenting his resignation as Director of the Bureau, which action he had taken in accordance with his original program of serving in that capacity only temporarily, as he is to return to Minnesota where he will take charge of the new Bureau of Venereal Diseases under the Board of Health of that State.

Upon the recommendation of the Director of the Bureau of Sanitary Engineering, several temporary permits for the operation of swimming pools in various parts of the State were granted. A set of regulations governing the use of sewage for the irrigation of garden products was adopted. In brief, these forbid the use of raw sewage, septic or Imhoff tank effluents or similar sewages for the irrigation of vegetables or fruits which may be eaten in the raw state, and defining conditions under which the use of such sewage may be used in other cases.

There was present the usual number of persons cited to appear before the Board for violation of the Food and Drug law, a full hearing being given in each case before decisions regarding future action were made.

W. H. KELLOGG, Secretary.

Obituary

F. DUDLEY TAIT.

The death of Dr. F. Dudley Tait in San Francisco on February 26th marked the passing of a forceful, and in many ways remarkable personality. Brilliant mental attainments, keen and enthusiastic appreciations of scientific medicine, and unselfish devotion to the cause of higher medical education loom large amid the stress and movement of his professional activities of more than a quarter of a century.

Dr. Tait was born in San Francisco in 1863 of English-Scotch ancestry. His father was a pioneer educator of this State, at one time superintendent of public schools of San Francisco, and later Professor of Latin in the old College of California. After some preliminary schooling in his native city, Dr. Tait was taken abroad, studied for a short time in England and Switzerland, and completed his academic education in France with the degree of B. S. He then returned to this country, took a medical degree at Bellevue Medical College and practiced for a short time in Kansas City. Returning to France he again followed courses in medicine and finally received the medical degree of the University of Paris in 1889. He came to San Francisco in the same year, practicing his profession here until the time of his death.

The influence of his European training was obvious, and unquestionably profoundly affected his intellectual and emotional outlooks on life. This was evident not only in those independent points of view so eminently French, which were so characteristic of him, but even to a more noticeable degree in those outward manifestations of manner which we are wont to associate with the Gallic temperament. His professional interest and work were no less colored by the same influence; indeed, he probably remained to the very end the most conspicuous exponent of French medicine and surgery in the West.

During the earlier years of his career in San Francisco Dr. Tait was chief surgeon of the French Hospital and also for a time was attending surgeon at the Woman's Hospital. More recently he was connected with the Experimental Research Laboratory of the Affiliated Colleges, University of California. He was also a member of the Board of Medical Examiners of this State for eight years, of local medical societies, the Societé de Chirurgie of Paris, the Western Surgical Association, and the American College of Surgeons.

Dr. Tait's professional reputation rested on firm ground. He was a daring and skillful operator possessed of a ready grasp of clinical problems and a critical enthusiasm. His knowledge of surgery was most comprehensive, based on a thorough acquaintance with its literature. He was a man of indefatigable energy, restless in the search for knowledge, impatient of compromises, and intolerant of lowly accomplishments. Yet he was the most stimulating of men; again and again he has placed his time, knowledge and purse at the disposal of those who came to him for advice and assistance. No trouble or inconvenience was too great for him once he was convinced of the sincerity of the applicant.

Although not a voluminous writer Dr. Tait made some substantial contributions to clinical and experimental medicine. His papers on The Recurrence of Hydrocele After Radical Operation, The Eversion of the Tunica Vaginalis as a Remedy for Hydrocele, published many years ago, and The Experimental and Clinical Notes on the Sub-Arachnoid Space, were largely inspired by purely clinical considerations. The more ambitious paper on Electric Sleep, published in conjunction with the late Dr. Raymond Russ, was based on the studies of Laduc of Nantes. His interest in the surgery of the respiratory tract was reflected in his paper on The Control or Elimination of Pneumo-thorax in Pleuro-Pulmonary Interventions; and one of his last contributions was on Fibrous Atrophy of the Parotid Gland with Special Reference to the Treatment of Salivary Fistula.

Years ago Dr. Tait ardently took up the cause of higher medical education. As a member of the Board of Medical Examiners he largely sponsored and furthered the legislation which placed the medical law in California upon firm ground. Few men have given more thought to medical education in general, and his views regarding undergraduate instruction should command respectful consideration. He urged medical faculties "to abandon the role of precedent worshippers, extend the medical rather than the pre-medical curriculum, cease developing the students' memorial powers, stop training parrots, get rid of antiquated dictionary stuff, abolish the monastic system of examinations, and thus eliminate the large element of lottery, lead the student to the bedside at a much earlier date, devote three-quarters of the curriculum to clinical work, make the teacher responsible for the student, restore the old-time close relation between the teacher and student, and thus contribute to the primary aim of education, the formation of character and intellect."

Though unable on account of his illness to practice medicine in the closing months of his life he nevertheless maintained his interest in medical affairs to the very end. The war had aroused in him an enthusiastic appreciation of its surgical problems and his great interest in the subject is reflected in the large correspondence which he maintained until his death with leading surgeons of the world, notably French confrères of long acquaintance. While accepting with stoic resignation the inevitable consequences of his malady, he possibly regretted beyond all else his inability to join his friends, la-bás.

A. J. L.

FRANK W. THOMAS.

Dr. Thomas died at his home, 441 Harvard street, Claremont, January 12, 1918, of gastric carcinoma, and was buried in Oak Park Cemetery, Claremont. He was born in Dublin, Ohio, September 4, 1853. His mother, nee Laura Hutchinson, was also born in Dublin, Ohio, on January 25, 1819, and his father, Daniel W. Thomas, was born in Columbus, Ohio, in 1817, both of Welsh and English ancestry.

Dr. Thomas was married to Miss Mary Lee on June 20, 1881. His widow and his daughter, Miss Charlotte Josephine Thomas, who was born in Marion, Ohio, survive him.

For his preparatory schooling, Dr. Thomas attended the Wesleyan University of Ohio, receiving his A. B. degree in 1878 from Wooster University. His professional education he received in the Starling Medical College, Columbus, Ohio, graduating as M. D. in 1880. He did post-graduate work in the New York Polyclinic, 1901, and attended lectures and clinics at Rush College several times. He was a frater in Beta Theta Pi, Wooster University, Ohio, 1874; a Knight Templar, a Master, Blue Lodge, Marion, Ohio, 1885, for four years; a High Priest in Chapter, Marion, Ohio, 1893-95; an Eminent Commander of Commandery, Pomona, California, 1910. He was a member of the Los Angeles County Medical Association and one of its councilors, representing Pomona, at the time of his death; he was also a member of the California State Medical Society and a Fellow of the American Medical Association. From 1914 to 1915 he was president of the Southern California Medical Association. Besides his professional affiliation, he was also president of the Pomona Valley Telephone Company from 1906 to 1908.

Dr. Thomas practiced medicine in Dublin, Ohio, 1880-1882; in Marion, Ohio, from 1882 to 1897, and in Claremont, California, from 1899, when he received his license, to 1918.

Dr. Harry M. Voorhees pays the following tribute: "By the death of Dr. Thomas I lose a very dear and esteemed friend whom I have known intimately for years. He will be greatly missed in his community, where he was very active to promote social and civic improvements; a student of medicine, honored by his colleagues, ever ready and willing, even in his declining days, to assist suffering humanity and cure their ills."

Dr. Joseph K. Swindt writes: "Dr. Thomas will be remembered and revered for his remarkable services to the profession itself. One of the founders of the Hospital Association, he had the honor of sending in the first patient, was the first doctor to act as president of the Board of Directors, and by his courage and energetic persuasion was the prime moving spirit in the work which accomplished the erection of Pomona's splendid new hospital building. As Dean of the Faculty of the Training School for Nurses and as Councilor for the Pomona Branch of the County Medical Society his wisdom, open-heartedness and generous nature were responsible, in a large measure, in uniting the profession of the valley in a lasting fellowship which has seldom been equaled in any community."

Dr. Elmer E. Kelly, in a few sentences, says: "Dr. Thomas' most salient traits of character were loyalty and faithfulness to duty. As a man in the community he took high rank because of his business sagacity and foresight. As a physician he reached his highest worth. His most loyal and admiring friends were his patients, and they will ever hold in grateful remembrance his skillful and tender ministry."

FRANK W. THOMAS.

INTERNATIONAL SURGICAL SOCIETY.

It was agreed at a meeting held in Paris on November 3rd, 1917, of delegates of the International Surgical Society from Belgium, France, Great Britain, Serbia and the United States of America, that:

1. The International Surgical Society be dissolved after the publication of the Volume of Transactions of the Meeting held at New York City, April 14th, 1917. Should any money remain after the publication of the volume, such money will be divided pro rata among members. Each member of the Austro-German group will receive his share; but the money belonging to members from other nations will be retained and applied to some object of scientific reparation in Belgium.

2. A new society will be created after the war on a similar basis, to be called the "Inter-Allied Surgical Society." Surgeons of neutral countries may also be elected members.

DECREASE IN BIRTH RATE IN HUNGARY.

The following statistics were read by the Karolyist deputy, Lodovico Hollo, to the Hungarian Chamber of Deputies, at the session of January 16, 1918.

"(1) Births.—Before the war 765,000 children a year were born in Hungary. In the first year of the war, 1914, the number of births was reduced by 18,000; in 1915 only 481,000 children were born—that is, 284,000 less than in time of peace. In 1916 the number of births was 333,000—that is, a reduction of 432,000. In 1917 the births amounted to 328,000—that is, the reduction was 438,000. Therefore our losses (in Hungary alone) behind the front reach the number of 1,172,866 individuals.

"(2) Deaths.—Whereas in time of peace infant mortality, for a period of seven years, was 34 per cent., in 1915 the proportion was increased to 48 per cent., and in 1916 to 50 per cent."

"These facts," said Hollo, "prove what sacrifices Hungary is making, to the prejudice of her own people, to continue the war."

The war is going to modify those material and mechanical features of education on which we have laid far too much stress in our modern and material world. It means that while men are learning to die and women are learning to suffer, that everybody is learning to serve; that everybody is learning to make the most of things and to go without things they had before; that something of a great mysterious beyond is creeping into our lives and is making itself felt for the ennobling and strengthening of all the virtues of humanity, for it is the call for the best that is in us and brings out the best that is in us. It brings us pleasure, storm, and sacrifice; it brings suffering and it is going to remain.—"Volta Review."

New Members

Barry, W. T., Santa Barbara.
Rosson, R. W., Weed.
Hornor, D. H., Dunsmuir.
Bernard, Lyde H., Calistoga.
Wetmore, Clyde T., Richmond.
Griswold, C. H., Modesto.
Conrad, D., Santa Barbara.
Potter, Nathaniel B., Santa Barbara.
Livingston, W. R., Ventura.
Leisenring, L. M., Placerville.
Smallwood, Walter C., Richmond.
Sperry, John A., San Francisco.
Bell, W. L., Richmond.
Parrett, O. S., National City.
Hicks, J. R., Delano.
Pomeroy, F. K., Fresno.
Stahl, Fred W., Los Angeles.
Cottle, C. C., Los Angeles.
Piness, George, Los Angeles.
Boyd, Geo. Thomas, Los Angeles.
Stone, Joseph Wm., Los Angeles.
Wolferman, A. Gertrude, Los Angeles.
Hammond, Nettie E., Los Angeles.
Riddle, Julia, Los Angeles.
Snyder, C. C., Los Angeles.
Coleman, Barney E., Los Angeles.
MacCloskey, Richard C., Los Angeles.
Bell, W. L., Richmond.
Frauer, Edgar A., San Diego.
Means, Samuel W., San Francisco.
Manson, Robert M., San Leandro.
Crawford, J. C., Orange.
Adams, W. C., Portola.
Flanders, Harriet Randall, San Francisco.
Magan, Percy T., Los Angeles.
Barclay, Harry A., Culver City.
Lacey, J. Mark, Los Angeles.
Jackson, Louis H., Los Angeles.
Roth, Geo. H., Los Angeles.
Graham, Chas. M., Inglewood.
Linhart, Laurence R., Los Angeles.
Holleran, Walter M., Los Angeles.
Moffatt, Howard L., Los Angeles.
Bayley, Walter, Los Angeles.
Bonthius, Andrew, Pasadena.
Truax, L. L., Los Angeles.
Atkinson, C. E., Banning.
Fanton, C. D., Riverside.
Hare, Jessie D., Fresno.
Sciaroni, Geo. H., Fresno.
Wallace, Carl T., Eureka.
Whittington, Wm. L., Eldridge.
Flora, G. A., Anderson.
Robinson, C. A., Ione.
Cochran, J. Sterling, Stockton.
Pearson, Chas. E., Turlock.

Resigned

Hare, C. B., San Jose.

Transferred

Wintermute, C. E., Saratoga, to Tulare County.

Deaths

Milliken, A., of Placerville, Cal., died Jan. 28, 1918, of bronchial pneumonia, age 84.

McAllister, W. F., died March 26, 1918; member of the George H. Thomas, Post No. 2, G. A. R.; native of Philadelphia; buried in National Cemetery, Presidio.

Krotoszyner, Martin, of San Francisco, was shot and killed by an insane patient April 20, 1918, in his offices. He was a leading specialist in genito-urinary diseases. Graduate from the University of Leipsic, Germany, 1887.

White, George Amos, of Sacramento, Cal., died March 3, 1918. He was a member of the State Society. Graduate of the Jefferson Medical College. Founder of the White Hospital in Sacramento.

Johnson, Walter S., 350 Post Street, San Francisco. Long Island Coll., New York, 1899. Licensed in California, 1904. Died in Letterman General Hospital, Presidio, San Francisco, April 26, 1918.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

Advertising Committee:
R. E. BERING, M. D. THOS. E. SHUMATE, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn.....Dr. W. H. Walker, Willows
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin.....Dr. W. F. Jones, San Rafael
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa.....Dr. Robt. Crees, Napa
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. P. H. Reilly, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI JUNE, 1918 Number 6

AN IMPERATIVE APPEAL FOR MEDICAL OFFICERS.

An urgent and imperative appeal has just been issued by the Surgeon General of the United States Army, for doctors for the Medical Reserve Corps.

There are to-day 15,174 officers of the Medical Reserve Corps on active duty, and the Medical Department has reached the limit of medical officers at the present time available for assignment. With these facts before the medical profession of this country, we believe that every doctor who is physically qualified for service between the age of 21 and 55 years, will come forward now and apply for a commission in the Medical Reserve Corps.

The Surgeon General says: "So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active or fighting phase, which will make enormous demands upon the resources of the country." The conservation of these resources, especially that of man-power, depends entirely upon an adequate medical service.

Drafts of men will continually follow drafts, each of which will require its proportionate number of medical officers, and there are at this time on the available list of the Medical Reserve Corps an insufficient number to meet the demands of these drafts.

The real necessity for the complete mobilization of the entire profession is imperative. It is not a question of a few hundred men volunteering for service, but of the mobilization of the profession for the conservation of the resources of this country. Let every doctor who reads this editorial and appeal from the Surgeon General, which appeal is based upon dire necessity, act promptly and present his application for a commission in the Medical Reserve Corps at the nearest Medical Examining Board. If you are not informed of the location of your Board, the editor of this Journal will advise you.

HOW TO OBTAIN COMMISSION.

Such questions as doctors seeking to enlist in the Medical Service of the Army or Navy are likely to ask, are answered in the comprehensive questionnaire which is being sent out by the Medical Section of the Council of National Defense. The questionnaire is subdivided into sections relating to both Army and Navy, to Army only, to Navy only, and to the Regular Army.

In view of the campaign now under way for medical officers, the complete text of the questionnaire is given herewith:

COUNCIL OF NATIONAL DEFENSE, MEDICAL SECTION.

The Surgeon General of the Army and the Surgeon General of the Navy need more medical officers. Our profession has responded nobly to the call of humanity, but more are required. You are needed. The following questions and answers will aid you in your decision:

INFORMATION RELATING TO BOTH ARMY AND NAVY.

(1) Q. How do I apply for a commission in the Medical Reserve Corps?

A. Write to the Surgeon General of the Army or Navy, the Council of National Defense, or for the Army appeal direct to an examiner for the Medical Reserve Corps. Detailed information will then be furnished.

(2) Q. What is the character of examinations?

A. Fill out the application form supplied by the Army, or in the form indicated by the Navy, then submit to a physical and professional examination. All papers, when completed, will be forwarded by the examiner to the Surgeon General's Office with a definite recommendation as the result of the physical and medical findings.

(3) Q. What provisions are made for myself and family in the event of injury or death?

A. Allowances will be made in case of injury or death according to the war-risk insurance act. These are arranged according to a schedule of the number of the officer's dependents.

Cost of Equipment.

(4) Q. What will be the cost of equipment?

A. The average cost of the necessary equipment in the Army is about $250, although even this amount is not absolutely necessary. The Navy provides an allowance of $150 to cover this cost. This is paid to the officer upon his first reporting for duty.

(5) Q. What is the time allowed for reporting after notification that I will be assigned to duty?

A. Fifteen days, with few exceptions, and then only when necessity demands.

(6) Q. What will I do when orders are received?

A. Obey explicitly.

(7) Q. What will be the character of orders received?

A. You will probably be sent to a medical military training camp for instruction.

(8) Q. How soon will the call for active duty be received?

A. If a request for immediate service is made, it will probably be granted. If you do not request immediate service, you will be given fifteen days in which to arrange your home affairs from the time you receive the notification that you will be assigned to duty until the day you are to report. However, do not discontinue the practice of medicine until you are notified that your services are needed.

(9) Q. How can I secure immediate service?

A. Write to the Surgeon General of the Army or Navy, Washington, D. C., making such a request, stating at the same time your qualifications for special service.

Present Need for Officers.

(10) Q. Is there an urgent need for medical officers now?

A. The present inactive Reserve Corps of both Army and Navy is practically negligible and consists of officers enrolled but engaged in hospital interne ships and other absolutely necessary present duties, with which there is no desire to interfere any more than is necessary, and of those retained by different departments for special duties. The Reserve, therefore, has been exhausted and it has been estimated that there is an absolute need now for 1,000 more medical officers in the Navy and 5,000 more medical officers in the Army.

(11) Q. What will be the character of service?

A. Every effort is made so far as possible to place an officer where his special talents will be best utilized, and his wishes with regard to such assignments are accorded every consideration.

(12) Q. When shall I discontinue the practice of medicine?

A. Not until notice is received from the Surgeon General to be prepared for active duty on or about a certain date.

INFORMATION RELATING TO ARMY.

(13) Q. What are the requirements for a commission?

A. An applicant for appointment in the Army must be a citizen of the United States between 22 and 55 years of age, a graduate of a reputable medical school legally authorized to confer the degree of doctor of medicine; he must have qualified to practice medicine and be in the active practice of his profession.

(14) Q. How do I accept a commission?

A. A notice will be received from The Adjutant General of the Army stating that you have been recommended for a commission. Sign the oath of office, take an affidavit before a notary public, and send it with a note of acceptance of commission to The Adjutant General of the Army, Washington, D. C., and at the same time send a note to the Surgeon General of the Army stating that you have accepted your commission as (here note the rank). In the same letter request immediate service, if desired.

(15) Q. When do I become an officer of the Medical Reserve Corps?

A. When the oath of office, together with a note stating that you will accept the commission offered in the Army, is received and is of record in the Office of The Adjutant General of the Army, Washington, D. C.

Pay and Term of Service.

(16) Q. For what length of time do I volunteer?

A. In the Army, five years.

(17) Q. What pay do officers receive?

A. Lieutenant, $2,000; captain, $2,400; major, $3,000; plus 10 per cent. for foreign service. Under the new act just signed by the President, if quarters are not available as a place of abode for wife, child, or dependent parent, each commissioned officer of the Army shall also be paid commutation at the rate authorized by law—first lieutenant, $432; captain, $576; major, $720.

(18) Q. What are the expenses for field service?

A. From $25 to $50 per month.

(19) Q. How many medical officers were on active duty April 26, 1918?

A.

Army.

Regular Medical Corps	843
Medical Reserve Corps	16,359
Medical Corps, National Guard	1,204
Medical Corps, National Army	111

(20) Q. What is the average number of physicians in each thousand discharged from the Medical Reserve Corps of the Army, and for what reasons?

A. Physical disability, 31; inaptitude, 13; domestic and community needs, 4; deaths, 3; resignations, 10.

INFORMATION RELATING TO NAVY.

(21) Q. What are the requirements for a commission?

A. An applicant for appointment in the Navy must be a citizen of the United States, graduate of a reputable medical school, between the ages of 21 and 44 years; the grade given is assistant surgeon, with rank of lieutenant, junior grade (corresponding to first lieutenant in the Army).

(22) Q. How do I accept a commission?

A. A notice will be received from the Surgeon General of the Navy stating that you have been recommended for a commission. Sign the oath of office, which will be supplied, take an affidavit before a notary public and forward it with a note of acceptance of commission to the Surgeon General of the Navy, Washington, D. C. In the same letter request immediate service, if desired.

(23) Q. When do I become an officer of the Medical Reserve Corps?

A. When the oath of office together with a note stating that you will accept the commission offered in the Navy is received and is of record in the Bureau of Navigation, Navy Department, Washington, D. C.

(24) Q. For what length of time do I volunteer?

A. In the Navy four years, or for the duration of war.

(25) Q. How many medical officers are on active duty?

A.

Navy.

Regular Medical Corps	844
Medical Reserve Corps, Medical Reserve Force, Medical Corps, Naval Militia, Retired Medical Officers	1,150

INFORMATION RELATING TO REGULAR ARMY.

(1) Q. How do I apply for a commission in the Regular Medical Corps of the Army?

A. Write to the Surgeon General, United States Army, Washington, D. C., and detailed information will be furnished.

(2) Q. Are there any vacancies in the Regular Medical Corps of the Army?

A. 1,100.

(3) Q. What is the character of questions?

A. Full information concerning the examination may be procured upon application to the "Surgeon General, United States Army, Washington, D. C." The essential requirements to securing an invitation to report for examination are that the applicant shall be a citizen of the United States, between 22 and 32 years of age, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, of good moral character and habits, and shall have had at least one year's post-graduate hospital internship.

(4) Q. What commission will I receive?

A. Those applicants who successfully pass the examination are commissioned first lieutenants in the Medical Reserve Corps, and sent to either the Army Medical School in Washington or to a training camp for a course of instruction, covering a period of approximately three months, during which time they draw the pay and allowances of their grade. If, at the close of their instruction, they pass the final examination, and are favorably recommended, they are commissioned first lieutenants in the Medical Corps of the Regular Army.

Pay in Regular Army.

(5) Q. What is the pay?

A. To each rank is attached a fixed annual salary, which is received in monthly payments, and this is increased by 10 per cent. for each period of 5 years' service until a maximum of 40 per cent. is reached. A first lieutenant receives $2,000 per annum, or $166.66 monthly. At the end of 5 years (during the period of the war, at the end of one year) he is promoted to captain, subject to examination, and receives $2,400 a year, with an increase of 10 per cent. after 5 years' service, making $2,640, or $220 per month. After 10 years' service the pay would be $2,880 annually, or $240 per month. The pay attached to the rank of major is $3,000 a year, which, with 10 per cent. added for each 5 years' service, becomes $3,600 after 10 years' service, $3,900 after 15 years' service, and $4,000 after 20 years.

(6) Q. What are my prospects for advancement?

A. During the existing emergency a first lieutenant of the Medical Corps, United States Army, is required to complete only one year's service, instead of the 5 years provided for by the act of June 3, 1916, to become eligible for promotion to the grade of captain, subject to examination.

(7) Q. What are the arrangements for retirement?

A. Officers of the Medical Corps are entitled to the privilege of retirements after 40 years' service, or at any time for disability incurred in the line of duty. On attaining the age of 64, they are placed on the retired list by operation of law. Retired officers receive three-fourths of the pay of their grade (salary and increase) at the time of retirement.

STAND BEHIND THE BOYS.

How many doctors have applied this now very expressive phrase to themselves? There is nothing that puts more heart and gives so much confidence to a soldier in the thick of a fight, than the thought that if he does suffer a casualty he will receive proper medical care and attention. What are you doing in this respect?

There are many boys, sons of your patients or friends who have been or will be called into the service, and what a source of consolation it would be to the parents to know that possibly their own doctor might be the one to look after their boy, and they will welcome your acceptance of a commission in the Medical Reserve Corps and compliment you for so doing.

The opportunity for you to do the most good in a professional way to the greatest number of people, is to offer your service to your country through the Medical Reserve Corps. Do not think longer about it, but apply at once to your nearest Medical Examining Board, and if you are not informed of its locality, the editor of the Journal will supply the necessary information.

STAND BY OUR BOYS, YOUR BOYS, THEIR BOYS. Remember the gallant French in '76. *The British who stood by Dewey in 1898. The Garibaldis who were always for LIBERTY.*

The rapid expansion of the Army calls for a largely expanded Medical Reserve Corps. The Surgeon General has issued a most earnest appeal for doctors. The Department has reached the limit of medical officers available for assignment.

MEDICAL EDUCATION IN TIME OF WAR.

It is an axiom of intelligent social order that there should be certain safeguards for the public in the matter of incompetent ministrants to public and individual health. The sole standard which is practicable, fair and efficient in its results from the standpoint of the public, is a standard of preliminary and professional education. Provided the aspirant has thorough preparation for and training in his department of therapy, he has the right to prepare for any system he may prefer just as the individual sick has the right to select what therapeutic agency or person he will patronize. Under these conditions the efficient method will show itself certainly and will eventually be chosen by the thinking portion of the population. The essential point is that preliminary and professional education shall be thorough and comprehensive. The regulation of the practice of medicine thus becomes solely a matter of educational standards and thorough training.

Every physician should read attentively the paper by Dr. H. E. Alderson of the State Board of Medical Examiners, on the Regulation of the Practice of Medicine in California, which was published last month. In connection with the argument of that paper, it is interesting to note the following quotation from a letter from the Surgeon-General of the Army to the deans of medical schools of acceptable grades: "It is the wish of the Surgeon-General that the same exacting standards be placed upon Medical Enlisted Reserve Corps men (i. e., medical students) that are placed on other men in time of peace, and that the professional training of Medical Enlisted Reserve Corps men should be decreased in no respect either in quality or quantity. The requirements for the satisfactory care of our soldiers are fully as high as for civil practice."

Dr. N. P. Caldwell, secretary of the Council on Education of the American Medical Association, said recently[1]: "Even for Army purposes, the great demand is not so much for ordinary physicians as for those of highly technical and special training. Emphatically, therefore, the present demand does not call for a lowering of educational standards but for a continuation of the present entrance requirements of two years of college work, and for further improvements in laboratory and clinical equipment, and more particularly in the methods of teaching in all medical schools. That by such improvements the demand will soon be supplied is evidenced by the fact that, in the better medical schools, the number of graduates has steadily increased each year for the past five years, while the number graduating each year from the lower grade colleges has steadily decreased." Dr. Horace D. Arnold[1] says: "I wish to emphasize again one point briefly mentioned in my opening remarks, namely, the importance of not lowering the standards of medical education during this period of war. It means that the modern thorough training, with its broad scientific basis, must be fully maintained, if we are to make of our medical students officers who are competent to give proper care to our soldiers. We must not relax the thoroughness or the essential content of that training. The fact that the number of teachers is reduced is merely a reason for those who are left to work longer and harder. It is not a justification for weakening the instruction given."

These quotations from such authority speak in no uncertain tones and come with the force of war orders. As has been urged before in the JOURNAL, the standard of civil practice must be maintained and advanced, simply because we are at war. So, too, must public health programs of every sort be pushed as they were never pushed in time of peace. And again here, at the root of the whole matter, we must see to it that the supply of highly trained and properly trained doctors is not reduced at its source. In the face of these facts, any effort to lower the standards or status of medical education because of war times, savors unduly of that Prussian propaganda we abhor. All along the line, keep our work at highest pressure and efficiency, and so will we quickest defeat the Hun.

---

1 A. M. A. Bulletin, 1917, xiii, 2.

THE SUPPRESSION OF QUACKS.

No feature of its many valuable activities has been more effective and directly beneficial to the public, than the steadfast policy of the State Board of Medical Examiners to suppress advertising quacks so far as money and legal machinery were available. As was pointed out in the case of Quack Chamlee of unholy fame, it is a matter of extreme difficulty to secure conviction of quacks even when caught red-handed in their quackery. This is illustrated by the notorious difficulty in securing conviction of abortionists. Cases are known where all circumstantial evidence was complete, including the corpus delicti fresh delivered, and the operator and nurse red-handed literally, and yet in the face of sworn testimony of competent witnesses, the lay jury acquits.

One has but to recall the wax works and Men's Museums of a few years ago, with their glaring electric displays, the blatant advertising of the men's specialists and similar quacks, charlatans and fakers, to realize the effective work of the Board of Medical Examiners, which has to a remarkable degree scoured such riff-raff and medical scum from the larger cities of the state. Even the daily papers show improvement in the number and boldness of the advertisements of this genus of medical parasite.

The legal work of the Board is voluminous. It includes the prosecutions of violators of the Medical Practice Act, and the closing of a large number of questionable medical offices and institutions, designing to separate the sick from their money. It has also been active in the matter of citations against violators of the Medical Practice Act. Numerous important court procedures arising from the operation of the Medical Practice Act, wherein the citation of specific provisions of the Act was to be determined, have been brought to a successful issue. The record of such work is almost endless and should receive the intelligent appreciation of every doctor.

Much remains to be done. There are always new crops of quacks growing up and new situations of quackery arising demanding new methods and new attacks. In all the Board is active and efficient. It has immensely raised the character of average medical service in the state. It has accomplished definite and important things in its program. In all of these it needs and should have co-operation and support from all doctors.

The suppression of quackery has always been handicapped by an unenlightened press. When we have a clean press, when medical advertisers and quack testimonials are eliminated from the newspapers, then the quacks will have lost their chief asset and purveyor of dupes. And also when the newspapers no longer carry such advertising, they will be more sincere in attracting strangers and tourists to this state. It is a hard thing to expect tourists to select the Golden State for their homes when its manifold excellencies are served up with a sauce of quacks, and charlatans and medical testimonials. May the State Board increase its good work of elimination until the state is thoroughly cleaned of this scum which hangs tenaciously to its skirts.

REBATES FROM DRUGGISTS.

Not nearly all of the druggists addressed by the Journal for a statement regarding their practice in the matter of rebates to doctors have yet replied. Several, however, have replied to the effect that they do not give rebates on prescriptions and do not give stock in the drug firm as an inducement to secure prescription work from doctors. In some cases the rebate consists of a free personal account to the doctor for his own and his family's drug and toilet sundries. Sometimes the druggist renders a bill in due form, but the bill is ignored by the doctor and the druggist cannot be blamed if he does not sue for collection, when forced collection would almost certainly mean loss of all prescriptions from that doctor. Cases rarely occur where the druggist makes a handsome present to the doctor rather than give him a direct rebate on prescription fees.

In all these cases the doctor is first to blame but not solely to blame. Without question the entire matter is on a much better plane than it was even a few years ago. Improvement has been fairly rapid, and while the general practice and custom are beyond reproach, there are still a few doctors and druggists, too, who bring contumely on their profession and lay the entire profession open to reproach quite without reason. Such are they who accept or offer rebates in some such form as enumerated above. For their sins the profession suffers. It behooves the profession, therefore, to purge itself fully of this evil and ancient scourge. The few among the doctors who persist in accepting, or perchance even demanding, rebates in some form should be shamed out of their anachronistic position. And if they yield not to shame, then their official societies should take pains to show them that they and their rebating are not wanted nor tolerated in good medical and pharmaceutical society.

If all druggists agreed to give no rebates there would be no individual loss from trade turned away for lack of rebates. But vastly better yet, if no doctors would accept rebates, and if all doctors would insist on paying their just debts, there would also be a remedy for the evil, and a remedy which would be final. We are rapidly approaching socialized medicine and fuller state control of medical practice and organization. Rebating will not stand the light of public control. Let it be abolished completely and at once. Let each doctor be ashamed to accept an unpaid account, or rebate checks, or stock in the firm. Let publicity and shame do their good work. Because, while the practice is small, its odor is great and a little of it makes a great stench.

"Have you had a thought that's happy,
Boil it down.
Make it short and crisp and snappy,—
Boil it down.
When your mind its gold has minted,
Down the page your pen has sprinted,
If you want your effort printed,—
Boil it down."—Survey.

SOCIAL INSURANCE.

At this date nobody can tell what will happen to Senate Constitutional Amendment No. 26, when it is voted on by citizens of this state next November. Most people vote against amendments they do not quite understand, and unless a vigorous propaganda is made for this amendment between now and November, the medical profession may rest assured that the Christian Science and insurance interests will attend to its defeat.

Insurance people oppose health insurance, they claim, not because they think it is necessarily bad, but because they fear the invasion of the state into all branches of the insurance field. Many large commercial organizations take the same view.

Furthermore, many of us are individualists and can see no reason why the state should invade so many fields of private endeavor. We are willing to recognize the need of government control and management of many industries during war-times, but are not yet convinced that all this will be best in days of peace.

But should the amendment carry, the legislature will have a busy time framing a health insurance bill, or disfiguring beyond recognition any proposed bill. Prohibition will probably be the big absorbing question, the one big legislative scrap. And even if a health insurance bill be proposed, the legislature may vote it down. If a bill passes and ignores Christian Science, this cult is apt to ask for a referendum. If a bill recognizing Christian Science should pass, there surely will be a request for a referendum. So that, all in all, health insurance is not yet upon us!

But in the meantime read the report of your Committee on Health Insurance. Read the transactions of your House of Delegates. Study them. Make up your minds as to what you are going to do in this matter. Then write and tell us. We are all interested.

EDITORIAL COMMENT.

You are reminded that the JOURNAL is right up to date now on manuscripts and the editor wishes to receive papers from all parts of the state, prepared for publication. To insure publication, it is only necessary to have something to say, to say it concisely and then stop, and to type it with attention to the rules of all manuscripts for publication.

Even yet there are vacancies in the list of county editors. Turn to the first page and see if your county is represented. Then turn to the County Society columns and see if your editor has done his duty.

The burden of proof on every doctor not in uniform these days is to show cause why he is not. Every doctor in civilian attire should consider himself under suspicion unless he has definite and really valid reasons.

In *The Indian Journal of Medical Research* for July, 1917, Lane records the curious fact that an autopsy on a tiger which had never eaten human flesh, showed the presence of the human type of hookworm. He states, however, that this will have no bearing on the methods now used in the eradication of human hookworm!

When other considerations are equal, members of the California State Society of Medicine should make a special point to patronize firms which advertise in the Journal and, moreover, should tell the firm where the advertisement was seen. It is a small matter for the individual doctor, it is a large matter in making the Journal more efficient.

The societies of Imperial, Lassen-Plumas, Merced, Placer, San Benito, Tehama, Tuolumne and Yuba-Sutter counties have not yet elected county editors for the Journal staff. This should be done at once. Much devolves on the county editors in developing the Journal. Do not delay longer. Elect your editor. If you already have one, notice how he is representing your society in the Journal.

Your particular attention is called to the annual meeting of the American Medical Association which convenes in Chicago, June 10-14. Those who are going should have made reservations before this date, but will find hotel lists and other information in the Journal A. M. A., March 30, 1918, et seq. The location, the critical time in medical military affairs, and the character of the program prepared, indicate the most successful and worthwhile meeting ever held.

The Food Administration advises garbage disposal by way of hog feeding. The pork from garbage-fed hogs is said to be equal to the best corn-fed pork. The outlay for plant and equipment is small as compared with the necessities for incineration of garbage. Here indeed is a chance for effective food salvage. The loss of food in garbage is still considerable, certainly much more than it should be. In any case, the garbage can well be turned into pork.

In one respect, Lloyd George and the Kaiser seem in agreement. Says the former: "We are fighting Germany, Austria and drink and, as far as I can see, the greatest of these deadly foes is drink." Says the latter: "The nation that will win in this war will be the one which is the most sober." It is time we seriously consider prohibition as a war measure of first importance, from the food, the economic and the public health points of view. There seems no doubt that the major question at the state election this fall will be that of prohibition, and here as in all public-spirited measures, the medical profession should lead.

Be sure to read under Correspondence, the letter from Dr. Harry M. Sherman, of the State Council of Defense. Then read over again the editorials in this issue on the military situation. Then decide, if you are not in uniform, what hinders your going in. If there is doubt in your mind as to whether *you* should go, or if you feel that you should not, do not run the risk of a wrong decision. Lay the facts before a competent tribunal. Write them to the State Council of Defense or to the officers of your State Society. In either case you will receive an impartial verdict based on the facts of your personal situation, and you will be fortified in your resolution and strengthened in your conviction that you are doing the right and patriotic thing, whether you go or whether you stay. But in any case, *decide now*.

The Smoke and Dust Abatement League of Pittsburg states that during 1917 about 500,000,000 tons of soft coal were burned in the United States, of which about 20 per cent., or 100,000,000 tons, were lost through incomplete combustion. This incomplete combustion is indicated by black smoke and soot. To allow black smoke and soot to appear is a direct evidence of coal waste and should be stopped. It is wasting a chief sinew of war and is unpatriotic. It is a nuisance unmitigated, it increases fogs, cuts off the sunshine, pollutes the atmosphere, hinders vegetation, destroys building materials, and is too costly and wasteful to be tolerated. If the black smokers will not of themselves stop this wasteful nuisance, they must be compelled to do so.

Many papers read at the annual meeting of the California State Medical Society at Del Monte have not yet been sent to the Journal. These papers become the property of the Journal and publication elsewhere without permission from the Journal is not permissible. Authors are requested to see that their papers are sent in at once. It is hoped that no undue delay will appear in their publication. Those papers already received again illustrate the difficulties which attend the medical writer who forgets the requirements of the editorial office. Seldom is a paper received without misspelled words, incorrect grammar, or poor typing. Wide margins and double spacing are too often forgotten. Carbon copies are returned, as only originals are wanted for the compositors. The simpler rules of punctuation are often abused. Words are capitalized without reference to their grammatical use. "E. g." is used when "i. e." is intended. And above all, the cardinal sin of too many writers is verbosity. Most papers could be condensed to their advantage.

---

31. Try to ease the mind of the patient, encourage him to look forward to being cured, even if thou art not thyself convinced of it, for this will greatly strengthen his nature.

38. When the patient does not follow thine injunctions or his servants and people do not promptly obey thine instructions or show thee the proper respect, it were better to give up the treatment.—Isaac Judaeus.

Special Article

TRAINING OF NURSES AND SOCIAL WORKERS IN THE PRESENT EMERGENCY.*

By PHILIP KING BROWN, M. D., San Francisco.

Attention was called in the March 18th number of the Red Cross Bulletin to the fact that the United States has only 7000 enrolled nurses and needs at once 35,000 more. There are said to be over 80,000 nurses in the United States who have the title R. N. which is essential to Red Cross service. This number includes thousands eligible to the title who were married and out of the profession when this standardization was put into effect several years ago and who applied for registration and the R. N. title on the ground of sentiment. Many more of the 80,000 have married since or have gone into the rapidly enlarging field for trained nurses in public health, social service, permanent hospital positions, laboratory work and in doctors' office work, so that it is probable that there are not available for Red Cross service as nurses more than 40,000 or 50,000 today. The situation is as serious as was our entering the war with an army of scarce a handful, and some plan for increasing the supply of nurses should be instituted at once if our soldiers are not to suffer as have the soldiers of France and England because of the scarcity of trained nurses.

The Government has set the example of intensive training to increase its organized man power particularly in the training of officers, and the same method must be instituted at once if we would meet adequately the need of a larger trained woman power. Tradition and needs, long outgrown, have fixed the methods of training nurses in hospitals, largely to meet the needs of hospitals and to provide private nurses for the sick, and not to meet the broadened fields of the nursing profession, so that today most of the best nurses are obliged to supplement their training outside of hospitals before they settle down to the particular branch of the nursing work that they choose to follow. If hospitals do not teach the endless ramifications of public health and social service work, specialties that have been developed through the medical profession and with which nurses should naturally be associated, is it quite fair to make a young woman go through the long three years of a nurse's training only to have need of an additional year or more of training before she attains the goal of her desire? A nurse's training in point of fact is not essential to many of these specialties although a valuable foundation upon which to build. Three years of hospital training, however, has a tendency to destroy initiative which is peculiarly necessary in public health or social service work. Practically no social workers are recruited from the ranks of nurses and many of the best public health workers are not nurses. The training of nurses today contains too much that ought to be required of young women before they enter training schools, since the physiology, anatomy, bacteriology, and chemistry taught in

* An address delivered May 15, 1918, at the Graduation Exercises of the Lane Hospital Training School.

most hospital training schools is exceedingly poorly done. It is text-book work, where laboratory work and practical demonstration are absolutely necessary to proper understanding. Then, too, the pupil nurses are not always adequately supervised, and the passing-on-of-information method is too much in vogue. Too much menial labor is required of nurses, work better done by orderlies or maids. No established system exists by which a nurse may take her three years' training in several schools where she could get to advantage the particular kind of work she might wish to follow. In no other educational system in the country is this true. In preparatory schools, colleges, technical and professional schools of high standing students may be accredited with work done elsewhere often without need of examination. Men in the army have been promoted from the ranks to positions as officers, and definite provision is made for the taking of examinations which qualify them for officers' rank. This lack of reciprocity among hospital training schools is one of the most unfair conditions in the present system of training nurses. It is due to the too frequent lack of a definite standardization of the teaching, and the fact that teaching is a profession and most hospitals have failed to look upon it as anything but an experience. Undoubtedly the hospitals have been seriously handicapped by having to make inducements to women to enter the schools and by too wide a swing of the pendulum in the eight-hour law, which interferes with intensive consecutive work and in consequence the personal interest of the nurses in individual cases. The conflict of interests which has arisen is one which must be straightened out, both in the interests of the hospitals and of the nurses, to say nothing of the interests of the sick and wounded in the present emergency. Why should pupil nurses be boarded, uniformed, and even paid small salaries by hospitals when they are being helped to enter one of the most popular and remunerative fields open to women—far more free and better paid than public school teaching. There is no more reason for it than that the public should pay the board of the normal school pupils. The cost of nurses' homes and their training should be borne by the pupil nurses and not by the sick.

If the point is made clear that hospitals under the present regime do not as a rule do the work of training the modern nurse satisfactorily, both because of poor teaching of the sciences for which they are not organized, and the omission of opportunity for special training, and that all hospitals require too long a training period, it follows that now is the time to recognize the situation. If there is no real need of the three-year training why not make the present emergency the basis for reorganization.

For some years past various efforts have been made by the leading hospitals in the country to improve all the conditions, educational and otherwise, attending the training of nurses and to draw into the profession more college women. The latest of these movements is the three months' intensive training course preliminary to two years' hospital work offered to college graduates of not over ten years' standing, by Vassar College this summer and subsidized by the American Red Cross. Herbert Mills, Dean of the Training Camp for Nurses, in an article on College Women and Nursing, in the Survey of April 27th says, "The work of the nurse has been largely private family nursing which has not seemed to the college woman to offer full opportunity for her liberal training, her developed personality, her social vision and obligation. The three years' training course of the better hospitals with much repetition of college courses has been a hindrance to the entrance of college women into nursing." It would be safe to add three other factors which have operated to keep college women out of nursing—the constant and unnecessary repetition of menial work, especially in the poorer schools, the entirely unnecessary length of service, and finally the dormitory and boarding school system of living and its limitation of independence, which is bad psychology, for nurses are a class of young women needing outside contacts, as people whose labor confines them closely always do, and the boarding school regime is intolerable to young women who have enjoyed academic freedom for four years. The Vassar experiment is known as the Plattsburg for Nurses and in three months the sciences and some administrative work will be taught. The graduates of the camp will save nine months of the present three-year requirement for nurses' training. This is certainly a big step in the right direction because it puts the teaching of sciences in the place where it belongs, in the hands of trained teachers with proper laboratories and makes it a requirement for admission to hospital training. However it is no solution to the immediate problem of shortage of nurses for community and war work, nor is it commensurate as a solution to the broad problem with the Stanford plan which has now been in operation a year, and has already been adopted by the University of California. The Stanford plan permits a college student at any time in her first three years or directly after it to take a probationary period of three months and follow it up at a suitable time if she desires by the balance of two years of hospital training. She is given her A. B. degree on completion of her nurse's course and under our state law is a candidate for examination for her R. N. This accomplishes in five years what the Vassar plan does in six and a quarter years and it does it equally well and far more conveniently for the student. She gets her mental food in a better balanced ration. This plan represents the highest practical advance in this country in the training of nurses and it is with no small amount of pride that you may recognize your connection with the instituton which has taken this leading place in putting your profession on a constantly higher educational basis.

It remains to consider a plan of reorganization of nurses' training that will both help the present emergency, remove the objections economic, social and educational to the present system of training and so broaden the nursing field that it may co-

ordinate better with the needs of the community.

A three months' course in anatomy, physiology, bacteriology, and chemistry in a Class A medical school or teaching institution properly equipped with laboratories and trained teachers and acceptable to an association of hospital training schools, should be a requisite for admission to all first-class training schools. This should be followed by six months of *well supervised* ward work in medical and surgical wards of a good hospital, and a three months' period of operating-room discipline. During all this time pupil nurses should board themselves and pay fees for their instruction as in any normal, vocational or technical school or in college. Pupil nurses should be ready then for a three months' final training in army or cantonment hospitals before going to the front. Army hospital work is a specialty by itself and to make good army nurses a supplementary course of training in a base or cantonment hospital is really necessary even for experienced graduate nurses. To meet the present emergency before any reorganization of nursing courses could be effective all pupil nurses in the United States of two years' standing should be available immediately for the final army hospital training and indeed the preliminary period under the present training scheme might be cut to eighteen months if necessary. Under the intensive training plan, should nurses not choose to elect army service as their specialty after the nine months' hospital work, further three months' courses in other special lines ought to be open to them. While only one such course might be required, it should be possible for a nurse to continue on and take any number of elective periods, paying a suitable fee for the training and she should be able to re-enter any school at any time for supplementary courses so that she might broaden her field of work. Among such special courses which might be given to advantage by hospitals are children's diseases, obstetrics, nursing of tuberculous, nervous, or mental diseases, laboratory and X-ray technique, and finally social service and public health as far as hospitals can teach them satisfactorily.

One cannot read a single number of the *Quarterly Journal of Public Health Nursing* without realizing that not even our public school system is of any more importance to the future welfare of the country than is the organized work of Public Health Nurses. From the cradle to the grave our people take no important step in which they do not feel the influence at once of this group. The infinite angles of infancy and child welfare—yes, even the prenatal care and direction afforded the mother are made possible by this body of women. The food given the child, the way it is handled, the housing conditions, exposures to epidemic diseases are all so followed up in these days that children are safeguarded from hundreds of dangers they or even their parents little dream of. From the moment the immigrant and his family land on our shores, they, too, come under the watchful eye of these guardians of health and through the factories and homes where they work and live is an ever-present influence for better social conditions. The nurse in our large public hospitals sees the end results of what is too often carelessness, exposure, mental and moral decay, and yet she is so situated that she is out of touch with the social problem involved in the case she cares for. If she has the social sense she must stifle it, for it has no place in her work in the hospital. If a man is brought in with typhoid there is no one to explain to his wife the probable length of his illness or to help her conserve her resources until the man can go to work again. Given this lack of social guidance and she and her family can easily become dependents. In one of our hospitals I saw an acutely insane woman with a depression in which she refused to eat and by her side sat her husband with the two little children of the family. He was the real sufferer—unable to go to his work because he could not leave the little ones, and utterly at sea about what to do. The hospital fed the woman scientifically and skillfully through a stomach tube and tended to her bodily wants, but it had no solution for the tragedy of the family. Any social worker or public health nurse could have told the man that the woman must go to a state hospital for the insane and that there were many institutions where his children could be cared for better than he could care for them, leaving him free to earn the living for the family. I think it is safe to say there is no public hospital today that has any claim to first standing that does not provide some social service guidance for its patients and opportunity for study along these lines for its nurses. In the *Survey* of May 4 Miss Edith King, manager of the National Social Workers' Exchange, says, "There is a marked labor shortage in social work. There are not enough people planning for the training. On the basis of last year's enrollment in the five or six leading training schools for social works 500 is a generous estimate of the students in training. The fact that available positions will probably be double and perhaps treble that number indicates the problem set by the shortage." She goes on to speak of the short training courses and to make a strong and well-founded plea for the importance of definite training, referring specially to the two-years' course and adds, "There is little use in believing that older women who have never held a paid position in their lives can suddenly blossom out in a profession for which they feel that 'experience in life' has fitted them." It seems to me important to emphasize what Miss King has already laid great stress upon—the need for thorough training in this field of social service work as well as in that of public health nursing. So many nurses wonder that public health positions go very frequently to lay people. The reason is not far to see when one follows the work of a trained public health worker and sees how little of it duplicates anything a nurse ever learns in the average hospital. Prof. Mills, in the article already referred to, in speaking of the less full opportunity for the nurse for liberal training than the college woman has, and the consequent limited social vision, says, "The great health movement of the last decade or two has rapidly changed this situation. In every direction have opened up lines of executive and social work which only the trained nurse

can do." This is just the point of the whole problem about which I differ emphatically with Prof. Mills, for with her present limited training and destroyed initiative the nurse has not the training she should have in executive work and in the vast majority of hospitals no social work whatever.

We cannot soberly contemplate the huge health problems of the war and of the later readjustment in the light of what we can see now, and not tremble at the risk we run in not preparing more than we are doing to meet them.

Original Articles

THE INTERRELATIONSHIP OF ASTHMA AND TUBERCULOSIS.*

By PHILIP H. PIERSON, M. D., San Francisco.

Asthma as a disease entity does not exist. Among other things it may be an anaphylactic manifestation. This aspect of the subject has been very fully and ably investigated by Talbot and Goodale of Boston and Selfridge, the latter having made a particular study of the polius and flora of California and the Pacific States. It may be due to chronic infection in some other portion of the body; it may be the result of a chronic congestion and inflammation as exists in cases of prolonged cardiac insufficiency. The particular type of asthma that is associated with pulmonary tuberculosis also bears out the idea that asthma, asthmatic breathing, is a symptom and not a disease in itself. Consequently, let me here explain what I mean by asthma.

To me it means a condition symptomatically consisting in more or less prolonged expiration and sometimes inspiration, rather constant for days, weeks or months, associated with exacerbations of more intense discomfort and often increased by exertion. To the patient himself, it may be represented only by a rattling in his "upper air passages" and a slight dyspnea, especially with expirations. The physical signs consist in prolonged expiration, general or localized, accompanied by musical or sonorous rales. With cough or increased depth of respiration, these signs are often increased.

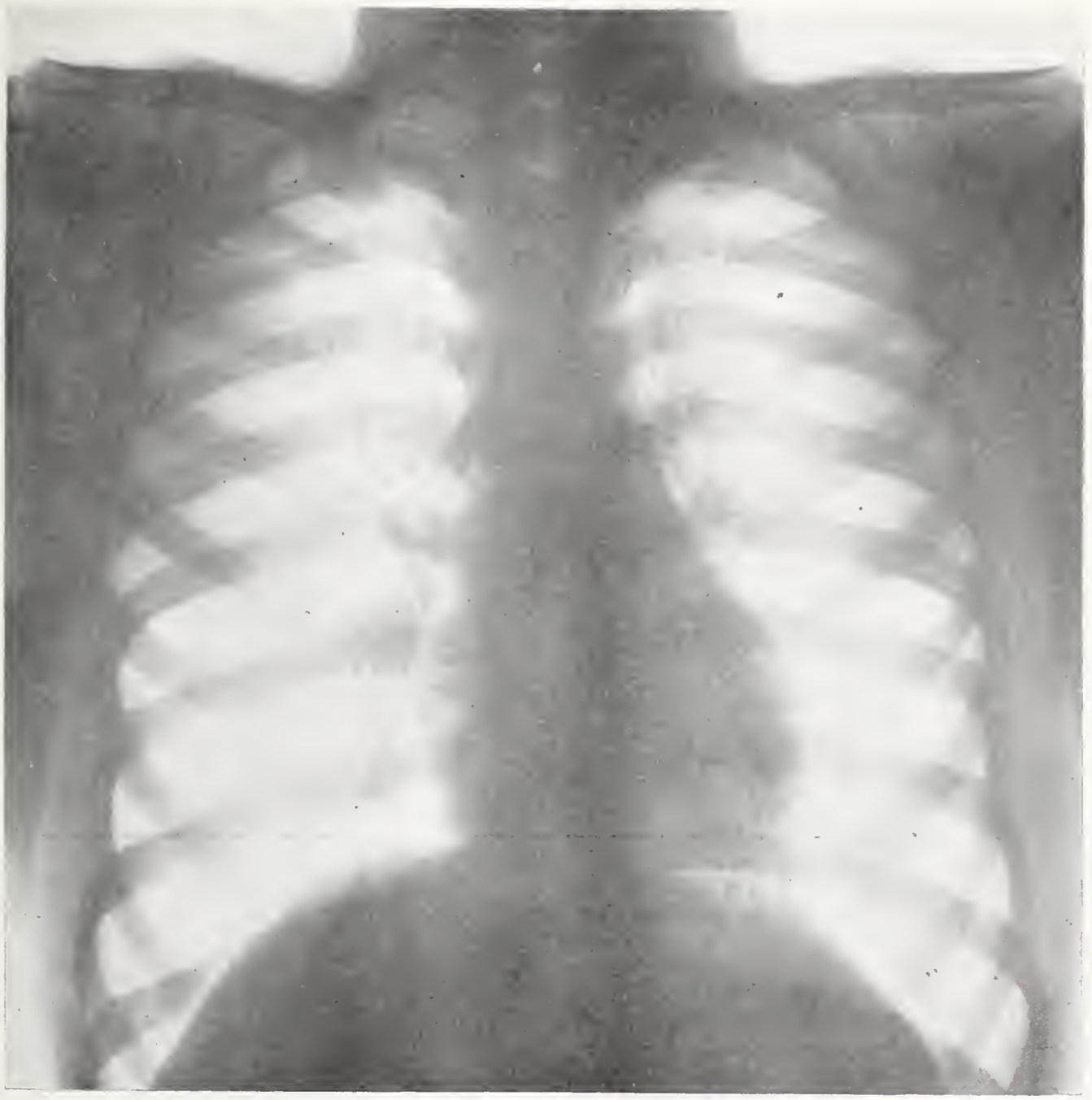
Many older writers on the subject were quite unanimous that these two diseases were antagonistic and seldom existed together. Brügelmann,[1] Sarda and Vires,[2] Grasset,[3] Rancoule[4] and Baur[5] held that asthma was antagonistic to tuberculosis and never secondary to it, but always primary. Landouzy[6] suggested that asthma might be an anaphylactic reaction to the tubercle bacillus. Roboule[7] referred to a pretubercular asthma, meaning that there are individuals with a nearly inactive tuberculosis manifesting itself by producing asthma. Osler[8] observed that one of the early signs of tuberculosis might be asthma with its wheezing and sibilant rales. Socca,[9] from the study of 840 cases of asthma, concluded that nearly all were due to tuberculosis. Reynier,[10] on the contrary, in an article of considerable length, concludes that asthma is in no manner dependent on tuberculosis. Hoffman[11] believes that if they do exist in the same individual each gives up its more pronounced symptoms and the asthmatic attacks become less marked than in other individuals and the tuberculosis becomes a fibroid phthisis. Giffin[12] in reviewing 83 cases of asthma in the St. Mary's Hospital records found only three cases of definite tuberculosis but expressed a suspicion of there being a possible latent tuberculosis as a basis in others.

That enlarged bronchial lymph glands, which may be accepted as an evidence of tuberculosis, were found in asthmatics was first reported in a series of eighteen cases by Chelmonski[13] in 1912. Lawrason Brown[14] is of the opinion that cases of chronic tuberculosis not infrequently developed asthma. Last year Orville Brown[15] published a book on asthma and in it he puts forth a theory—"The non-passive expiratory theory"—to explain the morbid condition which exists at the time of asthmatic attacks, whether mild or severe. His theory is that with ordinary respiration there is an influx of blood and lymph toward the periphery of the lung during inspiration and a retardation of the flow during expiration due to the increased intra alveolar pressure; also that by the act of frequent coughing, sneezing, etc., a still greater increase of intra alveolar tension is created as compared with the pressure in the bronchi and there is a greater impediment placed in the way of blood in the bronchial veins and of the lymph. This causes an obstruction of varying degree in the larger bronchiols with expiration and it gives the sibilant and musical nature to the breathing and rales. There is much more to the theory but this is all that need be considered here.

This requires at least two predisposing factors—paroxyms of coughing and congestion or inflammation in the moderate sized bronchioles. Let me emphasize the fact that asthma is not always a diffuse process but often limited to a small area in one lung. Although the signs may be localized the symptoms may be localized or general. In tuberculosis, we have both of these factors. In order that we may understand why asthma occurs in one or another part of the lungs, may I briefly

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

1. Brügelmann, W.—Therap. Monatsh., 1898, xii, p. 320; Das Asthma, Wiestaden, 1901, p. 39.
2. Sarda, G. and Vires, J.—Revue de la Tuberculose, 1894, ii, p. 121.
3. Grasset—Lecons Cliniques, 1896, from Reynier (No. 21).
4. Rancoule—Thèse de Montpeller, 1899, from Reynier (No. 21).
5. Baur—Forme Clinique de la Tuberculose pulmonaire, from Reynier (No. 21).
6. Landouzy, M.—Presse méd., 1912, p. 892.
7. Roboule—Thèse de Montpeller, 1904, from Reynier (No. 21).
8. Osler, Wm.—Principles and Practice of Medicine, 1905. Ed. 6, p. 322.
9. Soca, F.—Arch. gén. de méd., 1906, cxcvii, p. 1601. Ibid., 1907, cxcviii, p. 353.
10. Reynier, Leopold de—Proc. Sixth Internat. Cong. on Tubercs., 1908, i, p. 1133.
11. Hoffmann, Frederich A.—Nothnagel's Encyclopedia of Practical Medicine, 1902; Bronchi, Lungs and Pleura, p. 219.
12. Giffin, H. Z.—Am. Jour. Med. Sc., 1911, cxlii, p. 869.
13. Chelmonski, Adam—Deutsch. Arch. f. Clin. Med., 1912, cv, p. 522.
14. Brown, Lawrason—Osler and McCrae, Modern Medicine, Lea & Febiger, 1913, Ed. 2, i, chap. vi, p. 376.
15. Brown, Orville—Asthma, C. V. Mosby Co., 1917. p. 179.



Case No. 3. Example asthma more marked on right side.

review the main points in the development of tuberculosis.

Whether primarily or secondarily infected the first evidence of pulmonary tuberculosis is an enlargement of the bronchial glands. Their enlargement is a part of the normal mechanism for the battle against the disease. It is through their functioning that antibodies are manufactured. When the individual is enjoying good health we do not interpret the glands as a tubercular focus; it is only when the person is below normal that we point to these as of potential or possibly actual danger. In this latter type of individual the glands are swollen and more actively diseased. Their presence irritates the adjoining bronchi, setting up a low grade inflammation which may become the seat of secondary infection. So here we have the factors above stated which may start the vicious circle for an asthmatic condition. This condition may occur during childhood or later life and may irritate one bronchus and hence one lobe, or one lung or both lungs. This is a very important factor in properly interpreting *localized* asthmatic breathing. From the glandular condition slowly or rapidly develops a peribronchial fibrous thickening extending outward toward the periphery. This may involve one lobe much more than another. All this time the individual is manufacturing antibodies, and if these are sufficient the disease remains confined and not actually dangerous. If the scale turns against the individual in this struggle, we find a breaking down of the glandular or lymphatic elements at the hilus or nearer the periphery and a focus started in the lung tissue. Again depending upon the location and also upon the extent of the process, we may have one or more lobes involved by an irritating process in a bronchiole and a factor

established for a possible localized asthma. The tuberculous disease may not break down so as to invade the smaller alveoli but it may cause a chronic inflammatory process in the bronchioles on which is developed a secondary infection. The possible tuberculous etiology for this secondary infection must not be overlooked in such instances.

The pulmonary markings as seen in the X-ray are of great importance in determining this point. Dunham, Boardman and Wolman [16] studied these linear markings and hilus shadows and concluded that where these shadows were broader, denser and more beaded than normal they should be considered tubercular. In the slides which I will show these markings will be discussed. Of course, as the disease goes on to areas of caseation and softening there are still further causes for the congestion and swelling in the bronchioles, thus paving the way for an asthmatic condition.

From this survey and working upon the "non-passive expiratory theory," we have explained clinically and pathologically that localized foci of tuberculosis may, and from experience do, actually set up a localized or general asthma.

Before reading a few histories and showing some slides of X-ray plates, we should at least consider two other explanations of this asthmatic dyspnea. The theory more generally accepted in recent years was that there was set up a spasm of the bronchial muscles. The irritation causing this spasm, could very easily come from this latent or pretubercular infiltration at the hilus or in the peribronchial tuberculous tissue toward certain lobes.

Another explanation of this asthma, and least acceptable, it seems to me, is an anaphylactic status the result of the tubercle bacilli. In certain cases this may be the cause, for we know that the streptococci and other organisms are the cause of anaphylaxis. There are phases of more or less active splitting of the bacilli and their absorption and, consequently, periods of exacerbation of asthmatic dyspnea.

The localized areas of asthmatic breathing, I wish to emphasize again in conclusion. When we find persistent or repeated localized asthmatic breathing and musical rales in a lobe or lung, we should keep in mind the fact that there is probably a mechanical irritation and then inflammatory cause for it, and this cause is often tuberculosis in a very early or more advanced condition. It may be of considerable benefit in the early recognition of tuberculous disease. This has impressed me in several of the drafted men that I have had occasion to examine. The X-ray has shown definitely beginning tuberculous lesions. We should not be misled in our diagnosis by temporary disappearance of signs and symptoms for as the activity and intensity of the tuberculous area increases or diminishes, there will be an increase or diminution of signs.

Miss M. T., 20 years old. Expectorated a teaspoonful of blood last night, and there have been streaks of blood in the sputum at the time of her menstruation for the last three months. She has had "bronchial trouble" for the last year. This has consisted in wheezing and expiratory dyspnea, especially while lying down or when particularly tired. At times this has been quite severe. She has had slight fever at times and has lost about 10 pounds. Physical examination shows markedly harsh breathing at both hiluses anteriorly and posteriorly, with increased harshness extending toward both apices, the left more than the right. The X-ray shows definitely enlarged bronchial glands and a fine infiltration extending up into both apices and a few tubercles extending downward from the right lower bronchus. Example of asthma as manifestation of pretubercular state.

Robert B., 9 years old. Attacks of asthma twice a month or oftener during the last two years. Condition so severe that he has lost considerable time from school. Has fever at times and has lost 13 pounds. Had had tonsils removed and four teeth were extracted as possible foci of infection. Although he had a moderate reaction to oatmeal and was somewhat relieved when this was discontinued in his diet, the signs remained very much the same. Examination showed diffuse asthmatic breathing with musical and sonorous rales slightly more marked on his right side. X-ray showed considerable hilus thickening increases in the linear markings and diffuse mottling throughout central part of both lung fields. Probable tuberculosis. Example of glandular tuberculosis as cause of asthma.

Philip D., 15 years old. Ever since he can remember has had colds with cough which is followed by wheezing and expiratory dyspnea. Attacks of asthma last two days to three weeks. Often perspires slightly at night and on a few occasions has had severe night sweats. Examination at first showed asthmatic breathing almost equal on both sides but more recently it is almost entirely confined to right chest. X-ray shows increase in hilus thickening on right side with slight thickening of the markings to both uppers with some slight infiltration of right apex. Suggestive tuberculosis as basis of bronchial asthma. Example of asthma more marked on one side than the other with X-ray confirmation.

Mr. N. T., age 46. Operated a dry drill in a gold mine six years, and since this time pick and shovel work. Had a slight hacking cough a good deal of this time but never paid any attention to it. Eleven months ago became much worse, following pleurisy, and sputum become purulent. For the last six or seven months has had almost constant and very distressing expiratory dyspnea. He volunteers the information that it comes entirely from the left side. Examination shows marked wheezing on his left side, almost none on his right. Harsher breathing at his left apex with many consonating rales. X-ray shows diffuse pneumoconiosis with denser infiltration at the left apex with probable cavity-formation. Sputum positive for tuberculosis. Example of asthma complicating tuberculosis (one sided) implanted on pneumoconiosis.

Miss C. K., age 30. Attacks of asthma for 15 years with two years as the longest period of freedom. Eight and four years ago hemoptysis of one dram and one ounce. During that time lost from 125 pounds to 84 pounds. Now weighs 103. At present slight wheezing but no dyspnea. Has had every possible focus of infection searched and removed when found. Examination showed

16. Dunham, H. K., Boardman, W. W., Wolman, S.—Stereoscope X-Ray Examinations of the Chest with special reference to the diagnosis of Pulmonary Tuberculosis. Johns Hopkins Hospital Bulletin, vol. xxii, No. 245, July, 1911.

active tuberculosis at both apices with signs of cavity at the right apex. Elsewhere in the chest there was asthmatic breathing and musical rales. X-ray showed moderate infiltration both apices with a small cavity at the right apex. Asthma preceding active tuberculosis.

Miss N. D., age 24. Asthma as a child and up till ten years old. Then removed from sea coast and gradually during next five years it disappeared. Free from it for eight years till one year ago when it reappeared. Ten months ago severe pleurisy. Eight months ago hemoptysis of one pint. Wheezing and dyspnea very marked at this time. Less at present. Examination showed active tuberculosis at both apices with definitely prolonged expiration and musical rales in left upper lobe. X-ray shows marked infiltration in both apices with cavity at the apex. Example of asthma as evidence of probable bronchial tuberculosis as a child and its recurrence when the disease was again becoming active.

Mr. A. P., age 25. Periodic attacks of asthma during the last 14 years, more often at the end of the week. Last three to four days and length of entire freedom varies from one to three months. Every possible focus of infection has been investigated and whenever trouble was found it was removed, without as yet benefiting the asthma. Examination showed wheezing throughout both chests and scattered musical rales. X-ray showed marked hilus and peribronchial infiltration with definite dense arcas in both apices. These seem definitely tubercular to me. Example of frequent asthmatic attacks and evidence of apical tuberculosis.

Mrs. O. Five years ago asthma and tuberculosis were both discovered. At this time asthma was not severe but two years ago it became very disturbing. Since coming to Arequipa Sanatorium only has occasional wheezing spells. Examination has always shown prolonged expiration and musical rales, very much more marked on the right side than on the left. There are signs of cavity at the right apex and more often consonating rales on the right side than on the left. X-ray shows a moderate infiltration on the left side with a more marked infiltration on the right, especially in the upper and middle lobes, with a large cavity at the right apex. Example of persistent asthmatic breathing confined to the side of chief involvement.

Miss C. C. As a child always had wheezing with colds, but no difficulty in breathing. Two and a half years ago grippe, which led to the discovery of tuberculosis. For last 14 months wheezing only occasionally. If severe the wheezing seems to bring on coughing spells and with this a ropy expectoration. Examination has always shown more prolonged expiration and musical rales in her right middle and lower lobes than elsewhere. Sputum has been positive for tuberculosis. X-ray shows chiefly a fibrous tuberculosis and more marked in the right middle and lower lobes. Example of localized persistent asthmatic breathing in a tuberculous individual.

Mrs. A. Perfectly well till one year ago, when asthma began. This was very genuine, with difficult and prolonged expiration and ropy expectoration. Six months ago this was helped by some salty medicine, but at the same time she began to have fever, sweats and purulent expectoration. Examination showed active signs of consolidation and cavity on the left and a small amount of latent activity on the right. X-ray confirmed these findings. Pneumothorax was artifically induced and she has had no asthma since. Her tuberculosis is also very much improved.

Tuberculin is indicated in certain cases where there is chiefly a latent tuberculosis. Pneumothorax may be used where the disease is more active and confined to one side. Potassium iodide, at least theoretically, is contraindicated because of its possible action of breaking down tuberculous tissue.

THE VALUE OF RENAL FUNCTIONAL STUDIES IN THE PROGNOSIS AND TREATMENT OF NEPHRITIS.*

WITH SPECIAL REFERENCE TO THE RENAL TEST DIET.

By SAMUEL H. HURWITZ, M. D.
Assistant Clinical Professor of Medicine, University of California, San Francisco.

INTRODUCTORY.

No addition to our knowledge of any group of diseases can be without significance for prognosis and treatment. One need only glance at current medical periodicals to be convinced of the time and effort which is now being given to the study of kidney function. So much work has surely, by this time, produced some results which the practitioner of medicine can use for the benefit of his patients. General practitioners wish to know those tests which are of practical value and those which are of academic interest. The number of tests has multiplied so rapidly within recent years that considerable uncertainty concerning their mode of application and their interpretation prevails in the minds of those who would employ them. Functional tests will become more generally used and hence of more value when we know which ones can be discarded without loss, and which combination of tests (the smaller, the better) will yield all the information necessary in any given type of disease.

In interpreting functional tests physicians have had a tendency to make the judgment of laboratory findings too precise, and to place too much emphasis upon the knowledge gained from them. Such a tendency will go far to make the physician mechanical in the interpretation of the facts laid before him and to lead him astray. It has become clear to those who with care are in the habit of correlating laboratory with clinical observations that no functional test can be used as direct evidence for the diagnosis of the anatomic or etiologic type of disease present, but only indirectly as an assistance to the experienced in arriving at a final judgment. While a correct anatomical diagnosis is always desirable, it is of no especial importance in determining prognosis and treatment. What is of practical value to the general practitioner is a knowledge of the kind and degree of functional damage.

METHODS OF TESTING KIDNEY FUNCTION.

During the past few years, renal functional capacity has been studied chiefly in one of two ways: first, by testing the excretory capacity through the quantitative determination of the eliminative power of the kidneys for various substances in the urine, either foreign substances like phenolsulphonephthalein or the normal urinary constituents,—water, salt, and nitrogen; second, tests of retention through quantitative determination of the concentration of certain substances in the blood, either non-protein nitrogen as a whole or one of the

* Read before the Forty-Seventh Annual Meeting of the Medical Society, State of California, Del Monte, April 1918.

substances which compose it,—uric acid, urea, and creatinine.

Of these phenolsulphonephthalein is doubtless the most widely used. In fact, some may have been inclined to believe that the 'phthalein test is the only method now employed in our hospitals in the investigation of patients with nephritis, or other renal affections. The great popularity of phenolsulphonephthalein is justly due to the remarkable rapidity and completeness with which it is eliminated by the kidney, to its nontoxicity, and to the ease with which it lends itself to colorimetric estimation.

Whereas failure to excrete 'phthalein empirically signifies an incapacity on the part of the kidney to carry on its work, hence a bad prognosis, this fact tells us little concerning the nature of the impairment and how best to cope with it. In other words, this knowledge does not give us all the assistance which we wish in the management of our patients. Furthermore, it is a matter of clinical observation that the diseased kidney may retain water, salt, urea or any of the normal urinary constituents and yet allow phenolsulphonephthalein to pass through, at times even in excessive amounts. This fact, however, does not lessen the general usefulness of this test. It merely serves to emphasize the fallacy of a conception of kidney activity as an entity, all of the component physiologic parts of the organ increasing or diminishing synchronously, and to strengthen the view of a "dissociated" renal function, the glomeruli and the various subdivisions of the uriniferous tubules having widely varying physiologic functions and being affected to an unequal degree by the manifold renal and extrarenal factors which may impair the functional capacity of the kidneys.

Our aim therefore should be to ascertain not only the general eliminative power of the kidneys, but also the nature of the impaired function. This knowledge is essential if we are to safeguard the damaged organ and to direct our treatment intelligently toward the amelioration of the symptoms which depend upon disordered function. From the therapeutic standpoint, therefore, studies of the excretion of those substances,—water, salt and nitrogen, which the kidney is normally called upon to eliminate have given more valuable information, and it is the practical usefulness of such tests which it is my purpose to emphasize in this paper.

RENAL FUNCTION AS MEASURED BY THE ELIMINATION OF FLUIDS, SALT AND NITROGEN.

The normal kidney quickly responds to the ingestion of water, salt and nitrogen by eliminating these substances promptly and in good amount. Such a kidney, therefore, yields a urine of medium, low, or high specific gravity according to the proportion of fluids and solids that must be excreted in order to maintain the composition of the body fluids at a constant level. The diseased kidney, on the other hand, loses this flexibility, and the power to answer a demand for a more concentrated or a more dilute urine is lost. In disease the concentration of the urine remains permanently at the same height and the specific gravity becomes *fixed*. This latter phenomenon is so constant an accompaniment of impaired renal function and is so readily demonstrated that we shall no doubt come to regard a study of the diseased kidney as incomplete without this observation.

In practice, this mode of testing kidney function is carried out by giving the patient a diet containing a known amount of fluid, salt, and protein. The only requirement of such a diet need be that the amounts of the various food stuffs be known and that it contain a sufficient quantity of the diuretic substances of our ordinary food to make an adequate demand upon the kidney. The arrangement of such a diet is very simple in hospital practice, and not difficult in private practice. In the latter instance, it would only be necessary to ask the patient to eat three full meals, and to write down the approximate quantities of each article taken. It should be emphasized, however, that no solid food or fluid of any kind must be taken between meals nor during the night.

While the patient is on such a diet, the urine is collected punctually every two hours during the day, and a twelve-hour specimen is collected at night. The water, salt and nitrogen of the collected specimens may now be determined and from these, information of value may be obtained as to the character and degree of the functional impairment. The simple procedure, however, of measuring the volume of urine and the specific gravity yields data of the greatest importance concerning the functional capacity of the kidneys. The quantitative chemical determinations need be resorted to only when more detailed knowledge is desired either for diagnostic or therapeutic purposes.

A study of many patients by Mosenthal with a renal test dietary of this kind has shown that the normal kidney responds in a definite and constant way, and that the various types of renal and cardio-vascular-renal disease also show distinct types of excretion. Such tests in fact have assisted greatly in determining the part played by renal insufficiency in the symptom complex which may characterize this disease group. For purposes of clearness of presentation I have enumerated the main features to be noted in each type of response, and from a large number of patients studied in this way in the medical wards of the University of California Hospital, I have selected a few which illustrate these points of difference.

RESPONSE TO RENAL TEST DIET IN HEALTH AND IN DISEASE.

Normal Response to Renal Test Diet 1. Variations in specific gravity of two-hourly specimens of urine. Average variation should be 10 points or more. 2. No tendency to polyuria or oliguria. 3. Night urine small in amount (400 c. c. or less), regardless of the quantity of the fluid ingested or the amount of urine voided during the day. Specific gravity of night urine usually high (1.016 to 1.018 or higher). 4. Balance between the output and intake of salt, nitrogen and fluids should be approximately equal.

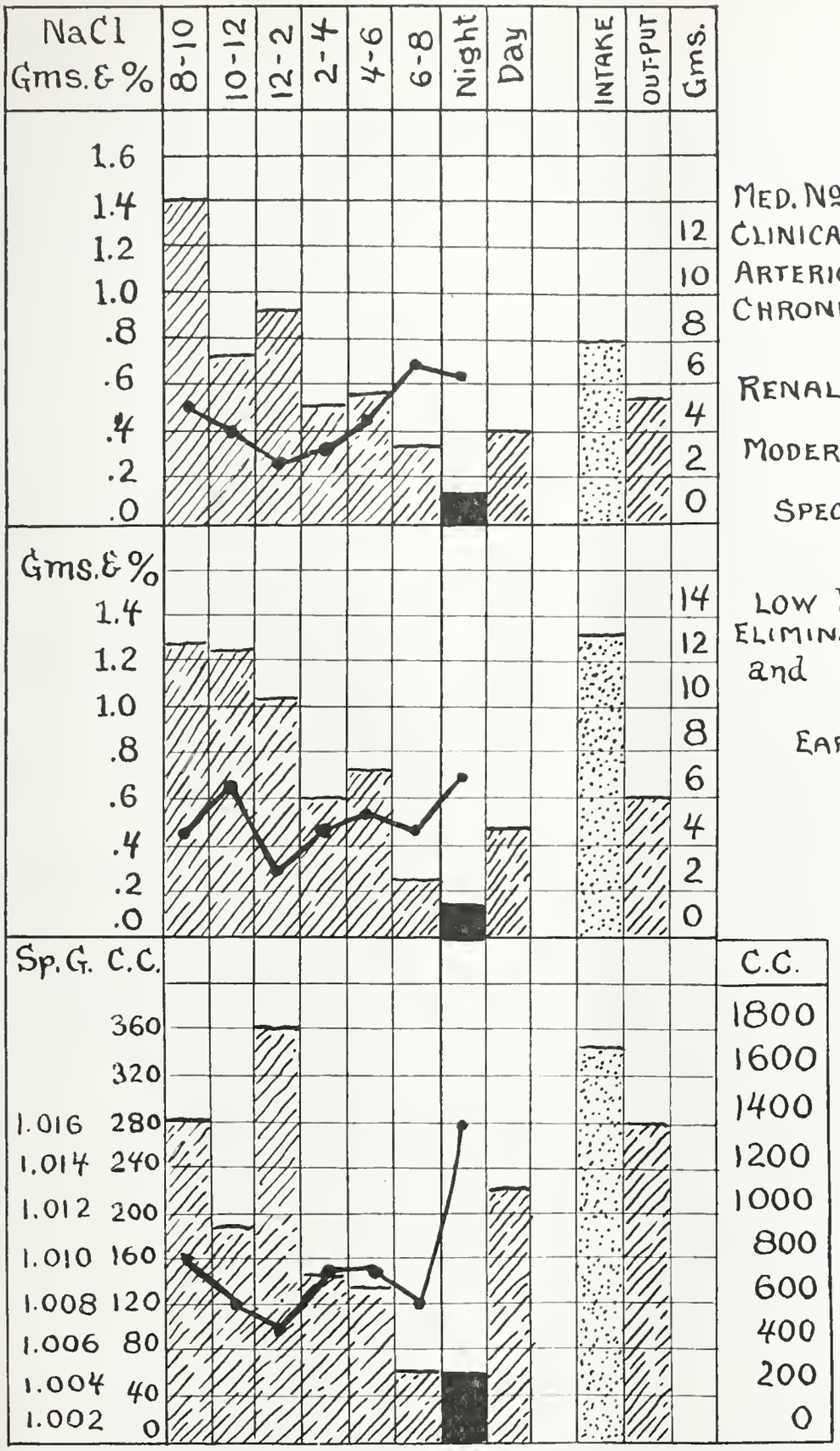


Table 1

NORMAL RESPONSE TO RENAL TEST DIET

Med. No. 16361, J. W., Age 33, male.

Clinical Diagnosis: Thrombosis of central vein of retina. Blurred, defective vision in left eye for a month. No symptoms of nephritis. **Fundi:** O. D. Normal. O. S. Disc swollen, oedematous, edge indistinct and blurred; retinal veins dilated and tortuous; flame-shaped and petechial hemorrhages. **Heart** not enlarged; sounds normal. Pulse rate 68. **Blood pressure,** systolic, 130. **Urine examination;** sp. grav. 1020; albumin and sugar absent; few hyaline casts. **Phthalein elimination** (Feb. 11) 70 per cent. in 2 hrs. **Urea Nitrogen:** (Feb. 15) 13 mgm. per 100 c. c. of blood.

DATA AFTER RENAL TEST DIET—FEB. 14, 1918

	Urine		NaCl		N	
Time of Day	c. c.	Sp. G.	%	Gms.	%	Gms.
8-10	350	1.012				
10-12	190	1.020				
12-2	180	1.019				
2-4	110	1.022				
4-6	85	1.022				
6-8	125	1.017				
Total, Day	1040	1.019		5.4		7.5
Night, 8-8	666	1.020	0.7	4.6	0.8	5.2
Total, 24 hrs	1706			10.0		12.7
Intake	1760			8.5		13.4
Difference	+54			—1.5		+0.7

Summary of Table.

1. Normal water balance—no polyuria or oliguria.
2. Normal polyuric response to night meal.
3. No fixation of specific gravity—maximum variation 10 points.
4. Night urine normal in amount and of high specific gravity.
5. Normal percentage output of salt and nitrogen in night urine.
6. No retention of water, salt and nitrogen in 24-hour specimen; moderate increase in elimination of salt.

Interpretation.

Normal response to renal test diet in a patient with suspected nephritis.

RESPONSE TO RENAL TEST DIET IN HYPERTENSIVE NEPHRITIS.

(Primary and Secondary Contracted Kidneys.)

1. Markedly fixed and low specific gravity. 2. Tendency to total polyuria. 3. Night urine increased in amount, of low specific gravity, and containing low concentration of nitrogen. 4. Diminished output of both salt and nitrogen.

RESPONSE TO RENAL TEST DIET IN CHRONIC NEPHRITIS WITH EDEMA.

A. *During the formation of Edema.* 1. Moderate fixation of specific gravity. 2. Oliguria. 3. Night urine increased in amount (nocturnal polyuria), of normal specific gravity, and with good percentage elimination of nitrogen. 4. Marked retention of salt and water.

B. *During elimination of Edema.* 1. Moderate fixation of specific gravity. 2. Polyuria. 3. Night urine increased in amount. 4. Quantity of salt eliminated may be double the amount ingested.

Table 2

RESPONSE TO RENAL TEST DIET IN A PATIENT WITH SUBACUTE NEPHRITIS

Med. No. 15632, R. H., age 23, male.

Clinical Diagnosis: Henoch's purpura; arthritis; subacute nephritis. **Symptoms:** Acute onset 2½ weeks before admission with constipation followed by bloody diarrhoea and purpura 2 days before admission. No symptoms of nephritis until Dec. 14. **Cardio-vascular system** negative; **Blood pressure,** systolic, 120. **Urine Examination** (Dec. 5 and 13), a rare hyaline cast; (Dec. 22), heavy trace of albumin; (Dec. 24), 3.7 gms. albumin per liter, granular and blood casts. **Phthalein Elimination** (Dec. 23-Jan. 24), 30-42 per cent. in 2 hrs. **Urea nitrogen** (Dec. 26), 15 mg. per 100 c. c. blood.

DATA AFTER RENAL TEST DIET—JAN. 18, 1918

	Urine		NaCl		N	
Time of Day	c. c.	Sp. G.	%	Gms.	%	Gms.
8-10	175	1.012				
10-12	130	1.014				
12-2	160	1.015				
2-4	185	1.013				
4-6	130	1.015				
6-8	190	1.015				
Total, Day	970	1.014		2.4		6.2
Night, 8-8	460	1.016	0.3	1.4	0.7	3.2
Total, 24 hrs.	1430			3.8		9.4
Intake	1760			8.5		13.4
Difference	+330			+4.7		+4.0

Summary of Table.

1. Moderate fluid retention; water balance positive.
2. Normal polyuric response to meals.
3. Well-marked fixation of specific gravity; maximum variation 3 points.
4. Night urine of normal high specific gravity; low percentage output of salt; almost normal percentage output of nitrogen.
5. Marked retention of both salt and nitrogen in 24-hour period.

Interpretation.

Well-marked grade of renal impairment in a patient with subacute nephritis. The functional defect is especially noticeable in the inability of the kidney to eliminate the ingested salt.

Table 3

RESPONSE TO RENAL TEST DIET IN A PATIENT WITH ESSENTIAL HYPERTENSION

Med. No. 15942, L. S., age 67, male.

Clinical Diagnosis: Arteriosclerosis; hypertension; gangrene of right foot. Pain in toes of right foot for 3 yrs.; slight oedema of ankles and nocturia for past several years. **Heart,** is moderately enlarged; systolic murmur; aortic second sound accentuated. **Blood vessels:** Arteries tortuous and thickened; retinal vessels tortuous. **Blood Pressure,** systolic, 195. **Phthalein Elimination,** 30 per cent. for 2 hrs.

DATA AFTER RENAL TEST DIET—JAN. 14, 1918

	Urine		NaCl		N	
Time of Day	c. c.	Sp. G.	%	Gms.	%	Gms.
8-10	158	1.014				
10-12	96	1.016				
12-2	132	1.021				
2-4	lost	lost				
4-6	302	1.011				
6-8	222	1.011				
Total, Day	910	1.014	0.4	3.64		6.8
Night, 8-8	1010	1.015	0.5	5.55	0.65	6.5
Total, 24 hrs.	1920			9.19		13.3
Intake	1760			8.5		13.4
Difference	—160			—0.69		+0.1

Summary of Table.

1. Moderate polyuria; slight negative water balance.
2. Normal polyuric response to meals.
3. Moderate fixation of specific gravity.
4. Night urine, increased in amount and of slightly lowered specific gravity.
5. Percentage elimination of salt and nitrogen in night urine well below the normal 1 per cent.
6. Balance of water, salt and nitrogen about normal.

Interpretation.

Moderatcly impaired function in an early case of hypertensive nephritis. The test diet shows a low specific gravity, a marked nocturnal polyuria, and a low percentage elimination of salt and nitrogen in the night urine.

Table 4

RESPONSE TO RENAL TEST IN HYPERTENSIVE NEPHRITIS

Med. No. 16455, I. B., age 51, male.

Clinical Diagnosis: Chronic nephritis with hypertension. Retinitis. **Symptoms** for several years: Headaches, dizziness, dyspnoea, palpitation, and blurring of vision. **Ophthalmoscopic Examination.** O. D. shows patch of atrophic retinitis, and several small hemorrhagic spots. O. S. nerve head indistinct and patch of hemorrhagic retinitis. **Heart,** 12.5 cm. to left. Faint diastolic murmur at apex. Aortic second roughened and accentuated. **Arteries,** moderate sclerosis. **Blood pressure,** systolic, 270. **Urine Examination:** Specific gravity 1012; albumin 0.4 per cent.; few hyaline and granular casts. **Phthalein elimination** (Feb. 20), 15 per cent. in 2 hrs. **Urea Nitrogen,** 19 mgm. per 100 c. c. of blood.

DATA AFTER RENAL TEST DIET—FEB. 22, 1918

	Urine		NaCl		N	
Time of Day	c. c.	Sp. G.	%	Gms.	%	Gms.
8-10	138	1.010				
10-12	108	1.011				
12-2	150	1.010				
2-4	360	1.008				
4-6	175	1.010				
6-8	295	1.006				
Total, Day	1226	1.009		4.9		5.1
Night, 8-8	590	1.012	0.4	2.3	0.6	4.2
Total, 24 hrs.	1816			7.2		9.3
Intake	1760			8.5		13.4
Difference	—56			+1.3		+4.1

Summary of Table.

1. Total polyuria; negative water balance.
2. Fixation of specific gravity; maximum variation 5 points.
3. Delayed polyuric response to meals.
4. Night urine increased in amount and of low specific gravity.
5. Percentage output of salt and nitrogen in night urine diminished.
6. Slight retention of salt and well-marked retention of nitrogen.

Interpretation.

The slight total polyuria and moderate nocturia with the tendency toward the fixation of the specific gravity and low percentage output of salt and nitrogen at night point to moderae renal impairment. There is, however, some variation in the urinary volume after meals, although this is considerably delayed after the noonday meal.

RESPONSE TO RENAL TEST DIET IN MYOCARDIAL INSUFFICIENCY (RENAL CONGESTION.)

1. Fixation of specific gravity at high level (about 1.020). 2. Oliguria. 3. Night urine about normal in amount, of high specific gravity and containing a normal concentration of nitrogen (above 1 per cent.), *but a low percentage output of salt.* 4. Normal nitrogen balance with a diminished output of salt.

Table 5

RESPONSE TO RENAL TEST DIET IN A PATIENT WITH MYOCARDIAL INSUFFICIENCY

Med. No. 16055, H. S., age 65.

Clinical Diagnosis: Chronic myocarditis; auricular fibrillation; decompensation with passive congestion of liver, spleen and kidneys. **Symptoms:** Attacks of dizziness, shortness of breath, and synosis for 6 months; oedema of legs for 5 weeks. **Heart:** 12 cm. to left in 5th interspace: sounds irregular; systolic murmur. **Blood Pressure.** systolic 150 (?). **Lungs,** oedema of bases. **Liver,** large, tender, palpable. **Urine examination:** Albumin 0.3 per cent.; granular and hyaline casts. **Phthalein elimination** (Jan. 16), 30 per cent. in 2 hrs. **Urea Nitrogen** (Jan. 18), 8 mg. per 100 c. c.

DATA AFTER RENAL TEST DIET—JAN. 21, 1918

	Urine		NaCl		N	
Time of Day	c. c.	Sp. G.	%	Gms.	%	Gms.
8-10	124	1.021				
10-12	120	1.021				
12-2	60	1.025				
2-4	154	1.022				
4-6	46	1.023				
6-8	68	1.025				
Total, Day	572	1.022	0.9	5.4	0.7	4.2
Night, 8-8	514	1.022	0.8	4.1	0.8	4.3
Total, 24 hrs.	1086		0.8	9.5	0.75	8.5
Intake	1760			8.5		13.5
Difference	+674			—1.0		+4.9

Summary of Table.

1. Oliguria; positive water balance.
2. Fixation of specific gravity at high level.
3. Normal polyuric response to noonday meal.
4. Night urine moderately increased in amount; of high specific gravity; normal percentage output of salt and nitrogen.
5. Retention of nitrogen but not of salt.

Interpretation.

The response of the kidneys to the renal test diet is characteristic of renal congestion: Oliguria, fixation of specific gravity at high level, and a night urine essentially normal in character.

Of the features enumerated the following are the most constant signs of a diminished function and therefore the more reliable. 1. A lowering of the maximal specific gravity; 2. A fixation of the specific gravity; 3. A nocturnal polyuria; 4. A low percentage of salt and nitrogen in the night urine.

Whereas the reliability of the inferences gained from the total balance of salt and nitrogen may depend in large measure upon the care and accuracy with which the diet is administered, this is not true of the concentration of these substances in the night urine. From this observation alone we may obtain information of the greatest importance in the management of patients.

It should be emphasized further that although the study of renal function by means of these dietary studies gives us some knowledge of the distribution of the structural changes, it is impossible to make refined anatomical diagnoses on the basis of functional tests. This test as well as the others which we are now using measure for the most part total renal function. They do indicate at times preponderance of injury in one or another of the renal structures, and it is the knowledge gained from such selective renal excretory capacity that makes possible to a certain extent the grouping of our clinical patients, and the utilization of such divisions as guides to treatment.

THE RENAL TEST DIET AND PROGNOSIS.

The renal test diet gives the earliest positive signs of renal damage, and it is therefore the most delicate indicator of renal function which we possess in the early cases of nephritis, in that it will show disturbances at a period before the 'phthalein test, or before there is any retention of uric acid, urea, or creatinine in the blood. In the later stages, however, it gives little additional information not obtained from the latter tests, because the renal test diet shows its maximum effect relatively early in the development of a renal insufficiency, and the response changes but little with the progress of the lesion.

Although of great help, therefore, in the early diagnosis of renal functional impairment, the value of the dietary test as a prognostic aid is lessened because of its very delicacy. It has been found, for instance, that in a large number of extra-renal conditions,—pyelitis, cystitis, hypertrophied prostate, marked anemia and a few other conditions, the eliminative power of the kidney for fluids, salt, and nitrogen may be impaired, although the kidney itself may be free from damage. Hence it should be emphasized that, when such evidence of functional damage is obtained, searching examination must be made for extra-renal causes or the curable renal lesions, especially a severe anemia, an hypertrophied prostate or other cause for urinary obstruction. Thus, the prognosis, so far as the results of the renal test diet are concerned, becomes dependent upon the cause of the functional impairment, and not upon its degree. We may anticipate, therefore, that the removal of a curable renal lesion will be followed by great functional improvement, while the persistence of an impaired eliminative power after the removal of all possible extra-renal causes would be strong evidence of the existence of chronic inflammatory changes in the kidney itself, a finding which would alter materially our prognosis and the management of the patient.

THE RENAL TEST DIET AS A GUIDE IN THE TREATMENT OF NEPHRITIS.

It is hardly to be expected that even the earliest discovery of a functional disorder should lead to brilliant therapeutic results when the underlying lesions are essentially progressive. All that we may hope for is to safeguard the damaged organ and to prevent in a measure the development of advanced anatomical changes. In no way can this be accomplished better than by the regulation of the diet of nephritic patients. And as a result of the information gained from such functional studies as I have outlined, we can now base the management of our patients upon the individual requirements of the case and not upon so-called general principles.

THE RESTRICTION OF FLUIDS IN NEPHRITIS.

The management of the water balance is of especial importance in acute nephritis and in that type of chronic kidney disease in which vascular irritability and the tendency to polyuria are such striking features. In this type of renal lesion (primary contracted kidney) polyuria is an evidence of a slight or early disturbance of the kidney vessels, and this results in the elimination of a urine having a low specific gravity and a low concentration of salt and nitrogen, even though the ability of the kidney to excrete *added* salt and nitrogen is not itself disturbed. It is for this reason that in the treatment of chronic nephritis of the arteriolar type Von Noorden has always insisted on the danger of abusing water. It is to him and his associates that we owe the demonstration that the conventional milk diet for nephritis, while empirically successful is irrational because of its excessive content of fluid and protein, and that the constant over-stimulation of the kidney by so apparently harmless a diuretic as water may entail danger to the integrity of the kidney's vascular functions.

While, therefore, some restriction of fluids may be indicated in every patient with nephritis, it is necessary to discriminate not merely in regard to the type of case where such restriction is indicated but also the amount of fluids allowable. Whenever there is any doubt, it is well to determine in every instance the permeability of the kidney to water, and to measure carefully the fluid intake and output. Such knowledge is especially helpful in the management of patients where edema is absent or at most only very slight. When, however, the kidney is obviously impermeable to water as shown by the presence of marked edema the ingestion of fluids above the amounts absolutely necessary to meet the body's needs will only increase the edema.

THE RESTRICTION OF SODIUM CHLORIDE IN NEPHRITIS.

There is perhaps no one therapeutic measure which has worked such hardship upon nephritic patients as the absolute restriction of salt over long periods of time; and yet there is no simple and more effective weapon in the edematous types of subacute and chronic nephritis. It is common knowledge that a patient with renal edema, who has been partaking freely of salt loses rapidly in weight when placed upon a salt-free diet. The abuse of this important therapeutic measure is to be attributed rather to its indiscriminate application to every nephritic without previously ascertaining the permeability of the kidney to salt in the individual instance.

As in the case of fluid restriction so here also the one essential guide to treatment is the absolute salt balance. Only from a graphic record of daily salt intake and output can one obtain any exact knowledge concerning salt retention. The management of the salt intake in nephritis is analogous to the carbohydrate intake in diabetes. In patients with renal edema, salt ingestion should be kept at a minimum as long as the edema persists. After the absorption of the edema, the ability of the kidneys to eliminate *added* salt should be tested occasionally, and the intake increased correspondingly as the eliminative power of the kidneys is restored. The exact estimation of the sodium chloride tolerance or a determination of the ability of the kidney to concentrate salt makes possible an intelligent adjustment of the salt intake. If this be maintained at a level just below the ability of the kidney to excrete salt, chronic nephritics may be kept free from edema and in a state of comfort over long periods of time.

THE RESTRICTION OF PROTEIN IN NEPHRITIS.

In some patients with nephritis, especially in those who show clinically high blood pressure, uremic symptoms and absence of edema, the kidney is unable to eliminate nitrogenous substances. This lowered permeability for the nitrogenous constituents of the urine forbids a high protein ration, for these substances tend to accumulate in the blood burdening the kidney unduly and indeed affecting the entire organism.

Because of the fear of nitrogen retention clinicians have for the most part played safe and have restricted the ingestion of protein in all types of nephritis. This blind application of a general principle to fit the needs of all patients has, as in the instance of salt restriction, worked unnecessary hardship upon many nephritics. This has doubtless been the case in many patients with that type of renal impairment with edema and with or without hypertension (chronic parenchymatous nephritis; nephrosis). Such patients, as we now know, show no nitrogen retention, the kidneys having retained their power to eliminate nitrogen. Here the defect is attributable primarily to a salt and water impermeability. Then too we must bear in mind that the nitrogen elimination may be normal in nephritics with hypertension and without edema. Therefore, if we are to carry out a rational dietetic treatment for the individual patient, we must have some knowledge concerning the ability of the kidney to eliminate not only the ingested fluid and salt but also the nitrogen constituents.

Extreme restriction of protein is advisable only in the acute stages of nephritis, and then only for short periods of time. The withdrawal of protein from metabolism must not be prolonged because the nephritic can not get along safely upon a smaller amount of protein than a healthy person. If protein is not administered in requisite amounts, the patient will draw upon his body protein.

A safe rule to follow is to restrict the protein to the minimum amount required by the body. A protein intake of one-half or three-fourths of a gram per kilogram of body weight is as low a protein intake as is compatible with health. This means that a patient weighing one hundred and fifty pounds should have from forty to fifty grams of protein a day. Should the severity of the condition warrant a further reduction, it is important to spare the body protein and maintain weight by the liberal addition to the diet of carbohydrates

and fats. When on such a diet, the ability of the kidneys to eliminate *added* nitrogen should be tested from time to time. Further additions to the protein of the food may be made from time to time as the excretory function is restored. The weight and health of chronic patients may be satisfactorily maintained by adjusting the protein intake at a point below the eliminative power of the kidneys for the ingested nitrogen.

Studies of the permeability of the kidneys for fluids, salt, and nitrogen are therefore of great assistance in the laboratory control of nephritis. They aid in visualizing the actual daily response of the kidney to our therapeutic measures and they guide us in the management not only of the disease, but of the individual patient.

Discussion.

Dr. H. D'Arcy Power, discussion: It has been possible during the past year to collect data in a great many cases in the Polyclinic Service of the San Francisco Hospital bearing on the question of the importance of the night urine as compared with the total output of urine, with the result that I am more and more convinced of the value of this symptom as a diagnostic test of the existence of incipient renal disease. In many cases far ahead of the finding of casts or albumin we were able to find differences in the direction of an abnormal output of night urine and low specific gravity which later developed marked renal symptoms and some of them were confirmed at autopsy. I have not the list of these cases with me, but at the next meeting I hope to bring the same. And I would remark here that it is quite possible to form a fairly good judgment upon the ordinary menu, merely taking care that the patient has been one or two days at rest and regularly fed. In some ways the normal diet seems to me to have advantages over one that is artificially constructed.

SCHISTOSOMIASIS IN CALIFORNIA.*

ALFRED C. REED, M. D., San Francisco,
Clinical Instructor in Medicine, Stanford University Medical School.

The group of diseases classified under the term schistosomiasis have this in common, that they result from infection of the portal system with some variety of the schistosomidae family of trematode or leaf-like worms. This particular family is distinguished by having sexually distinct adult forms, in place of the usual hermaphroditic forms, and by producing non-operculated ova. Three clinical types of schistosomiasis are observed, corresponding to the three species of schistosomidae. The distribution, prognosis and natural history of these three types differ considerably. The method of spread, manner of human infection, character of intermediate host, and sanitary significance, are similar.

In all three forms the chief pathological features arise from the deposition of the irritating eggs, or their conveyance as emboli through the blood stream. All are characterized by a peculiar type of inflammatory reaction, and the formation of characteristic fibrous tissue deposits containing egg clumps and round cell infiltration. The chief site of these pathological changes is in the lower bowel, the urinary bladder, or the hepato-portal system, depending on the variety of infection.

For many years schistosomiasis was known in Egypt under the guise of endemic hematuria, until finally in 1851 Colonel Bilharz of the Royal Army Medical Corps described the parasitic cause. His name was applied to the parasite and to the disease, viz.: Bilharzia and Bilharziosis. Some 52 years later, in 1903, Sir Patrick Manson described a differing species in the West Indies, in cases of schistosomiasis presenting intestinal, rather than vesical, symptoms. The species S. Mansonii was established by Sambon four years later. The third or Japanese species was described by Katsurada in 1904, after the clinical disease had been under observation by Japanese physicians for several years. We have, then, three types—first, the endemic hematuria of Bilharz, with the bladder chiefly affected; second, the Mansonian or rectal form, and third, the Japanese infection, where the liver, portal system and intestine are involved together.

The vesical type, or Bilharz disease, occurs chiefly in Egypt and other sections of Africa and the Mediterranean littoral. It has a scattering distribution in south Asia and the West Indies. The rectal or Mansonian type is found in Egypt, Central and South America, central and south Africa and the West Indies. Sporadic cases are not infrequent on the Atlantic and Gulf coasts of the United States. The Japanese disease is endemic in certain provinces of Japan, and in the lower Yang-tze valley of China. A few sporadic cases have been reported elsewhere, and some two or three have been imported into the United States.

The geographic survey thus reveals that schistosomiasis is a disease of wide tropical and Oriental distribution, and that its endemic habitat is a possible menace to the United States in two general areas. There is constant possibility of trans-Pacific importation of the Japanese variety by immigrants or returned citizens from China or Japan. There is constant probability of importation of the African types from the West Indies, Central and South America, as well as from the Mediterranean countries and Africa. Several cases have come by way of Hawaii, through Portuguese and Spanish laborers.

The clinical picture of schistosomiasis is fairly distinctive and essentially unlike diseases of cold climates. The Mansonian or rectal type shows itself symptomatically as a chronic dysentery, accompanied by mucus, blood and tenesmus. There is frequent enlargement of the liver and spleen, although not so uniform or extensive as in the Japanese disease. There is an enormous proliferation of Bilharz tissue, consisting of dense cellular infiltration with development of fibrous tissue. This results in excessive thickening and lobulation of the intestinal wall, and the production of saculations and pseudo-adenomatous polyps, which may even extrude from the anus. In this tissue the ova are found embedded, and rupture of egg nests through ulceration of the bowel wall leads to their appearance in the stools. The fibrous peritoneal infiltration, thickened bowel wall and papillomatous

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

formations, may often be palpated through the abdominal wall. The worms, which are resident in the ramifications of the portal vein, seek the intestine by preference for deposition of ova. Occasionally the ova become free in the blood stream, where they act as emboli or may set up local irritation elsewhere, as, for example, in the lungs. Clinically, the eggs of the Mansonian worm appear characteristically in the stools and are distinguished by having a single lateral spine.

The Bilharzian or vesical type of schistosomiasis shows itself symptomatically as a recurrent, apparently causeless, hematuria. Often there is no other symptom than hemorrhage for a time. Then comes the gradual increase of Bilharz tissue in the urinary tract, and especially in the bladder. Vesical hypertrophy, polyp formation, lithiasis, cystitis, prostatitis, and all the sequent disorders which may arise from such a pathology. Fistulous communications appear. Ascending renal infection and septicemia are not uncommon.

The Japanese type of schistosomiasis was described at length by the writer[1] in 1915. Nine cases under personal observation in the Yale Hospital in central China were reviewed. Clinically, this variety exhibits three stages. The first is known as urticarial or river fever, or kabure. It is manifested in an urticarial eruption accompanied by fever, lasting three to six weeks, and is typically acute with no serious organic involvement. The second or transition stage, in case of heavy or repeated infection, marks the approach of the chronic cachexia and gross anatomaical changes. With this transition there is an advancing and painless enlargement of the spleen and liver, and slight recurring febrile attacks. The splenic tumor may extend well below the umbilicus. With developing cirrhosis, the liver is apt to decrease in size, but the added portal retardation causes still further splenic hypertrophy. Recurring periods of more or less severe dysentery are in evidence, and gradually a progressive cachexia is established. This stage is essentially chronic, lasts one to five years, and merges into the third and terminal stage, which is characterized by cirrhotic contraction of the liver with ascites.

In the third stage diarrhea is less pronounced, there being only occasional periods of increased bowel movement without tenesmus and with little evidence of ulceration, although even here ulceration may be a prominent feature. Ascites and anasarca steadily advance. Emaciation and languor increase. The patient becomes apathetic. The liver retreats behind the costal margin. Digestive troubles appear. The splenic tumor becomes massive. A fatal issue is assured after an indefinite time, usually measured in years. Death may follow general debility, or, more, often, a terminal infection.

In all forms of schistosomiasis, curative treatment is unknown. Symptomatic relief can be given, especially where mechanical improvement is possible in the advancing pathology. In the Japanese disease in China a large variety of drugs was employed with no evident effect. Quinine has been advocated, but was useless in our cases. Salvarsan, emetin, thymol, santonin, aspidium, copper sulphate, hexamethylene, salol, soamin, mercury, iodides, and arsenic were equally useless. Temporary improvement was sometimes seen after the use of iron, nux vomica and ginger, evidently a symptomatic benefit only. The specific curative must meet the indication of killing the adult trematodes which are free in the portal circulation, and this with no serious injury to the human host. No such drug is thus far known.

Except so far as symptomatic relief is possible, treatment resolves itself into prophylaxis. Prognosis depends primarily on continued residence in an endemic area, with opportunity for constant or repeated re-infection. In all forms of the disease the danger varies directly with the degree of infection and repetition of infection. Europeans are as subject as natives, if similarly exposed. Schistosomiasis does not necessary progress to a fatal issue. With no re-infection there is reason for believing that the parasites may disappear after a number of years, and the body return to normal, except in so far as organic changes have supervened. In the Japanese disease, for example, persons exposed to a single infection may undergo only the stage of urticarial fever, although possibly for years dispensing the ova as carriers. A fatal termination is practically assured, on the other hand, when the victim has reached the third stage.

Five cases of schistosomiasis have come under observation in the Stanford medical service in the past two years. Of these, four were of the Mansonian type and one was Bilharzial. In addition to these, Dr. Herbert Gunn in 1906 (J. A. M. A., Apr. 7, 1906) reported three cases in San Francisco, and in a personal communication states that since this date he has had under observation ten additional cases, making a total of thirteen cases.

Case 1. M. F. Female, Portuguese, aged 30, native of Madeira, came to the United States five years ago. Housewife and cook in occupation. Her husband is a Portuguese, who has a clonorchis infection. She complained of hunger pain, relieved by eating, coming on about two hours after meals, and radiating from the epigastrium to the lower dorsal region. Sometimes the pain was constant without reference to food. She suffered nearly constant nausea and frequent vomiting. There was an alternation between diarrhea and constipation.

She had typhoid at eleven years and rheumatism four years later. The digestive history was comprehended in her immediate illness. There was no further history of significance. Examination showed a large, rather obese, healthy appearing woman, well nourished and well developed. There was no abnormality of head, throat or chest. The abdomen was fat, tympanitic and somewhat tender under the right costal margin. There was no other abnormality except obesity and a tender right upper quadrant.

The urine was normal. Blood showed a moderate anemia, 11 per cent. eosinophiles, 48 per cent. lymphocytes, 41 per cent. polynuclears, and 12,000 white cells. Stools showed trichocephalus and schistosoma Mansonii ova.

Case 2. P. S., male, aged 36, native of Porto Rico, went to Hawaii 16 years ago, where he lived 15 years, coming to san Francisco one year ago. His illness consists of increasing weakness and

[1] Am. J. Trop. Dis. & Prev. Med., VIII, 1915, 250.

disinclination for work. His wife had been treated for hookworm in the clinic and hospital and thought her husband had the same trouble.

Except for having had malaria several times, the history is of no significance. Examination showed considerable pyorrhea and infected tonsils. The sclerae were icteric. Chest and abdomen were normal. There was some edema of the legs. All glands were palpable. The urine was normal. Blood showed a moderate anemia, an average of 8000 white cells, with 55 per cent. polynuclears, 40 per cent. lymphocytes and 5 per cent. eosinophiles. Stools showed ova of trichocephalus and schistosoma Mansonii, and larvae of strongyloides. While under observation, the patient developed typhoid fever, which ran a mild and normal course.

Case 3. A. A male Japanese, aged 32, one of a party of Japanese who embarked from New York for San Francisco via Panama. Several of the party developed typhoid and were admitted to the hospital for this disease. The patient ran a mild, light, typical typhoid course. His stools showed uncinaria, trichocephalus, and a mixture of Mansonian and Bilharzian schistosoma ova. Spleen and liver were somewhat enlarged, but the influence of typhoid infection may have accounted for both. His blood showed no anemia and but 3 per cent eosinophiles.

Case 4. A. A. Male Japanese in same party as case 3. Rectal schistosomiasis.

Case 5. An Englishman from South Africa, who showed symptoms and signs of vesical papillomata, due to Schistosomiasis Bilharzia.

In each of its forms schistosomiasis constitutes a serious social and economic danger where it is endemic. The results are closely comparable, whether in China and Japan, the West Indies or Africa. In all these regions the results are serious enough to constitute a major public health problem. The actual death rate is almost impossible to estimate because of factors introduced by the chronic and disabling character of the disease, which permit intercurrent and terminal affections to play so prominent a role. Its chief menace lies in its long and disabling course, interfering with health and strength, and thus directly contributing to social and economic deterioration. It is thus closely analogous to hookworm disease. This analogy extends also to the method of infection by skin penetration, and to the general means of spread. Hookworm disease is established throughout the endemic habitat of schistisomiasis, and the economic and social results of the two conditions are undoubtedly more or less intermingled. It follows, therefore, that those considerations which allow fairly definite estimation of the physical and mental loss from hookworm disease are applicable to schistosomiasis in direct proportion to the relative incidence of infection.

The prophylaxis and public health control of schistosomiasis is dependent on an understanding of the intermediate life cycle of the trematode. The ravages of Bilharzia disease in Africa, especially in British troops in the Boer war, led to an exhaustive study of the situation by an English Bilharzia Mission, headed by Colonel R. T. Leiper, of the London School of Tropical Medicine, in 1915. This investigation established definite knowledge of the life history of schistosoma.

The ova are cast off from the human or animal host, in the stools, and if received into water, proceed to the intermediate cycle of growth. Dogs and cats are the usual animal hosts. Tepid, quiet waters are most favorable. In a period varying from ten minutes to one hour after reaching water active free-swimming miracidia hatch from the eggs. These miracidia are not infective for man, and the human disease never arises from them. The miracidia infect certain varieties of fresh-water molluscs, which thus become the intermediate hosts. Of the African fresh-water snails, Bullinus and Planorbis are chiefly incriminated. According to Leiper (Brit. M. J., May 18, 1916), Bullinus affords harborage to the terminal spine type or Bilharzial schistosoma, and Planorbis to the lateral or Mansonian type. The ova of the Bilharzian worm are distinguished by the terminal spine, the Mansonian by the lateral spine, whereas the Japanese egg has no spine, but only a little thickening of the egg membrane. Other species of snails have been reported infected with schistosoma, and the list of possible intermediate hosts is probably still far from complete.

On entering the snail, the miracidium develops into a sporocyst, which in turn produces daughter cysts. These migrate to the digestive gland and rapidly enlarge until finally the entire bulk of the mollusc is filled with their ramifications. The infected snail can then be recognized with the naked eye. A change in color of the digestive gland, in Planorbis from black to ochre, also assists in the gross detection. In the sporocysts develop the cercarial forms of the schistosome, which finally escape by rupturing the sporocyst and are discharged from the mollusc periodically. As in all digenetic trematodes, the terminal stage of development in the intermediate host is the cercarial form. The free swimming cercariae are infective for man. These cercariae must be carefully differentiated from those of avian and other trematodes, which are not, so far as known, pathogenic for man.

There is a striking similarity between schistosoma cercariae and hookworm larvae in their manner of infecting the human host by penetration of the skin. Leiper found that the warmth of the living body attracted the cercariae, which easily and quickly passed through the skin of a living animal, whereas only a "slight degree of penetration" took place in a dead mouse immersed in infected water. When a live mouse was immersed in infected water, which originally was full of cercariae, only a few cercariae and a large number of detached tails were found after an interval of two hours. Infection by mouth is, of course, possible if cercariae are carried to the stomach with water or food. In the definitive host, the parasite develops slowly through several metamorphoses, sex differentiation appearing early. The route of the trematode from skin to portal system has not yet been clearly established.

To summarize, then, schistosoma ova are thrown off in human or animal fecal material, and under proper developmental conditions are received in muddy, shallow, tepid water. Here mobile miracidia are quickly hatched, which infect certain specific types of molluscs and in the mollusc de-

velop to the cercarial stage, which is infective for man and other mammals. The cercariae, as opportunity affords, penetrate the skin of the human host, and after a prolonged cycle of development, appear as sexually distinct trematodes in the radicals of the portal vein.

The prevention and eradication of the disease may advantageously be considered from two aspects: first, its eradication in endemic areas, and second, prevention of its introduction into non-infected districts. Eradication in endemic areas is complicated by the agricultural customs of the various tropical and Oriental lands of its occurrence. To illustrate, the paddy field system of cultivation in China and Japan, together with the use of night soil for fertilizer, constitutes one of the most serious sanitary problems of these countries, not alone for schistosomiasis, but also for hookworm and other parasitic and bacterial diseases, such as the typhoid group, cholera and the dysenteries. The paddy fields are well-nigh universal, which means that all tillable land is terraced into small level patches with surrounding dikes, and the water overflowing from one small field to the one below it. This affords an excellent and thorough distribution of infection present in the fertilizing material. The farmers work barefooted, often being knee deep in the mud and water. In the water lily and lotus fields they are almost immersed in the muddy water. The fields are heavily fertilized with human excrement, a system of conservation which, in modified form, will undoubtedly obtain eventually in the west. One of our great economic wastes is the non-utilization of this great source of plant food. Here, as in many other things, we can take example to our advantage from the lands of the east. In the paddy fields, then, is found an excellent culture bed for pathogenic parasites and a well-disposed system for their wide distribution.

Leiper found that schistosome cercariae die almost at once in a 1.1000 solution of sodium bi-sulphate. He advises that unfiltered water containing cercariae can be rendered safe for drinking and bathing by heating to 50 degrees C., by storing at least 48 hours, which exceeds the survival period of the cercariae, and by adding disinfecting agents, such as sodium bi-sulphate in 0.1 per cent. strength.

In the case of Schistosoma Japonicum, Katsurada has shown that the eggs will die, or hatch miracidia which will die, within ten days. Storage for this length of time would, therefore disinfect the material, and would not be objectionable to the Oriental farmer, who already knows that the fertilizer is enhanced in value by maturation and decomposition. It has constantly to be remembered that native customs and methods cannot be easily and often cannot be safely changed. This fact is the major sanitary problem of the tropics. Eradication of schistosomiasis in endemic areas is no small task, and the means to be used must be elaborated more or less independently in each district.

From our standpoint, however, the problem of prophylaxis resolves itself into preventing the creation of new endemic areas. In the United States the cases, so far as known, have been sporadic and imported. As illustrated in those here reported, the chronic carriers of the infection are discharging ova in unlimited numbers through long periods of time. Provided an appropriate intermediate host is available, these ova will at once develop into the dangerous infecting cercarial forms. The problem, therefore, becomes the question whether, in the United States, are found molluscs capable of acting as intermediate hosts. This is a public health problem of some importance. If intermediate hosts are found in the United States, then every case of schistosomiasis should be rigorously quarantined and the stools disinfected, and all immigrants from endemic areas should be examined to detect carriers. Alien carriers ought to be excluded. If a proper survey of the molluscs of the United States shows no probable host for schistosoma, then the imported cases of the disease are harmless and may safely be disregarded. It is to be hoped that such a molluscan survey can soon be undertaken.

350 Post street.

VENEREAL DISEASE CONTROL IN CALIFORNIA*

H. G. IRVINE, M D., Director, Bureau of Venereal Diseases.

ETHEL M. WATTERS, M. D., Sanitarian, Bureau of Venereal Diseases, California State Board of Health.

The Surgeon General's reports[1] show that as high as one-fourth of the total sickness in the Army has in the past been due to venereal disease. In an army made up for the most part of trained men, during times of peace when the incapacitation of a certain number of men mattered not so much, even this amount made these diseases one of the real problems of the Medical Corps.

In contrast to this, consider how the problem increases when, in the twelve-week period following the mobilization of our new Army,[2] venereal diseases were almost five times as prevalent as all other communicable diseases put together. The figures for the annual admission rate per thousand for this period were—for venereal diseases 121.9; for other communicable diseases 25.7. Under communicable diseases are included pneumonia, dysentery, typhoid, paratyphoid, malaria, meningitis and scarlet fever; measles is not included.

The point to be especially emphasized is that this rate occurred at a time when large numbers of new men were undergoing intensive training; when incapacitation was fatal not only to the training of the individual, but also it retarded decidedly the training of the group of which he was a part. In this same twelve-week period (2) previously referred to, there were reported from 31 cantonments 21,742 new cases of venereal disease. In a communication[1] received by the

* Read before the Forty-seventh Annual Meeting of the Medical Society, State of California, Del Monte, 1918.

(1) Syllabus of an address to assist company commanders in the instructions of their men in the knowledge of venereal diseases. Issued by the Surgeon General. Page 2.

(2) Based on figures and reports from Surgeon General's office.

Bureau of Venereal Diseases about March 1, was the statement that since war had been declared against Germany, over 30,000 men in our Army had been on sick report because of venereal diseases; it was estimated that this resulted in a loss of more than five hundred thousand days of military training besides the cost of treatment. The figures obtained at the time of the mobilization of the National Army in September and October, 1917, should appeal above all others to civilians. Here the rate is based decidedly upon the incidence of these diseases in civil life. In the week ending September 28, 1917, the National Army records show the unprecedented rate of 388 per thousand per year. This should demonstrate the need, particularly at this time when the United States is contemplating an army of four or five million men, of suppression and control of venereal diseases in the civil communities.

In attempting the solution of the problem of venereal diseases, the complexity of which must be recognized, it will be impossible in the time allotted to this paper to deal in detail with all phases of the control of syphilis and gonorrhea. It may, however, be approached from four points:

1. Control of the Carrier.

Many physicians who are interested in venereal diseases have said they were concerned only in the medical phases of the subject; the moral and sociological sides not concerning them. In this way they have attempted to dodge the issues of prostitution and alcohol. In dealing with this problem from a public health standpoint, physicians must interest themselves in all sides of the problem. Prostitution is essentially a matter for the courts to deal with, but history has shown that until the civil authorities have been taught to recognize the relationship of prostitution to venereal disease, no adequate action is taken by them. It is therefore necessary to be concerned not only with the medical diagnosis and treatment of prostitutes, but by demonstrating to the civil authorities the amount of infection in these women to urge upon them adequate enforcement of the laws against the business in general.

In a paper read before the San Francisco Medical Society and published in the March issue of the California State Journal of Medicine, Sperry has gone into many of the details of the plan for control of this group of infected persons, so that at this time it is desirable to emphasize only the need of enforced quarantine. So far as prostitutes as a class are considered, when found diseased quarantine must be rigidly enforced, otherwise it will avail little to give them medical treatment, especially from the standpoint of gonorrhea. Attention must be called to the fact that unless adequate provision is made by the State to prevent these women from returning to their business, the medical efforts are wasted, inasmuch as they almost immediately become reinfected. It is necessary, therefore, that there be adequate facilities provided for the three classes of prostitutes; that is, for the feeble-minded—permanent care, for the confirmed offender—long commitment to reformatories, for the young girl—rehabilitation by social service agencies.

The commercial prostitute is a prolific spreader of disease because she nearly always has gonorrhea, perhaps chronic in nature, and if allowed to practice her profession openly she daily exposes from ten to twenty or more patrons. From the standpoint of syphilis she is not so important, as she contracts it early and thereafter may take sufficient treatment to keep the disease under control. Clandestine prostitutes are a danger, not so much on account of number of persons they individually expose, but because they are more numerous, and being youthful offenders, are more likely to be acutely infected and less informed as to the care of themselves and their patrons.

With commercialized prostitution the burden of blame rests on the woman, as she more frequently solicits the man; exception should be taken, however, to the pimp and the panderer who exploit her. With clandestine prostitution the man and woman alike should feel the weight of the law, and it is certain there would be fewer such exposures if the man could also expect a jail sentence or hospital quarantine for his syphilis or gonorrhea. The question of commercial prostitution is becoming of less consequence in our campaign, as there are now not many cities which tolerate open or licensed houses of prostitution. In this regard, Riggs[3] of the Navy found that at the naval station at Norfolk, Va., when there were 80 commercialized houses of prostitution in that city, 85 per cent. of the infections were due to commercialized vice.

Facilities for Free Diagnosis and Treatment.

There is a very large number of patients afflicted with venereal diseases, who cannot afford to pay for adequate treatment. These patients are not treated at all, or they apply to the druggist and are supplied with nostrums, or they are insufficiently treated at the hands of private practitioners. Emphasis should be placed on the fact that a small amount of treatment with these cases does little good from a public health standpoint; this is of course more true with gonorrhea than syphilis, since it is infectious as long as it is present; whereas syphilis may possibly be rendered temporarily non-infectious. The great need is to place each patient in a condition so that he will not be a danger to others; this means, generally speaking, a cure. The man or woman, then, who can only afford to pay for a little treatment should be sent at once to a dispensary or hospital where they may receive sufficient treatment. This brings up the need for increased hospital and dispensary facilities. In many cities of forty or fifty thousand people there are no free dispensaries. It is to be hoped that this campaign against venereal disease will demonstrate the need not only of facilities for these diseases, but for others as well. When these dispensaries are formed, they should be standardized according to the regulations of the State Board of Health.[4] There should be adequate social service facilities provided so that cases will be carefully followed up and not al-

(3) Venereal Prophylaxis in the Navy. Riggs, Chas. E. Journal Social Hygiene, July, 1917.

(4) See Special Bulletin No. 24 for venereal disease control. Published by the California State Board of Health.

lowed to neglect their treatment. Inasmuch as many physicians, especially in the smaller communities, have not the means at hand for laboratory diagnosis, this has been provided free by the State.[5]

3. CONTROL OF PRIVATE PATIENTS.

Adequate provision must be made for the control of private as well as indigent patients. This necessitates the passing of laws or of rules and regulations by the State Board of Health under which these patients can be required to take the necessary amount of treatment. There should be a system of notification, identifying in some way those persons venereally diseased, providing for the reporting of the name and address when under certain circumstances the patient permits himself or herself to become a danger to others. Health officers should be responsible for the control of these individuals when they are reported. The rules should also state the responsibility of parents and guardians for the compliance of minors. Many physicians believe that notification is bad, inasmuch as they think it will have a tendency to drive patients away from them and into the hands of druggists and quacks. The public in general and patients in particular should be informed carefully that these reports are absolutely confidential, and that so long as they continue treatment and conform to the necessary rules their names and addresses need not be divulged, and that even if that be done the health officer's record is also a private and confidential one. Rules should be passed preventing the counter-prescribing by druggists, or the sale of any preparation or nostrum to be used in the treatment of gonorrhea or syphilis. England's venereal disease act of 1917 embodies these principles. We also believe it will be possible by a campaign of education to practically put the quack out of business. The control of these cases depends entirely upon the hearty co-operation of the medical profession, both individually and collectively, and it is to be hoped particularly at this time when all of us are anxious or should be anxious to do everything possible by way of war service that physicians will pledge themselves to this co-operation.

4. EDUCATION.

The systematic education of both laity and physicians to the dangers of these diseases, to their prevalence and the needs of adequate treatment, is perhaps the most important of any single method of attack. This must include talks to girls and boys on sex hygiene by proper persons, talks to mothers and fathers, the distribution of literature and the placing of exhibits, the stimulation of provision of proper recreational facilities in communities now without any, and the greater use of those at hand. Proper education will do much to prevent the individual from becoming infected, to stop the recruiting of prostitutes and to bring under treatment those persons already infected. It is necessary to teach parents to supervise more carefully their children's conduct; it is necessary to obtain more women police and better juvenile detention homes; it is necessary to prevent sex immorality and to insist upon the single standard of morals in order that the venereal diseases may be as readily prevented as other communicable diseases.

(5) Containers may be had by application to State Hygienic Laboratory, Berkeley, Cal.

WHAT HAS BEEN ACCOMPLISHED IN CALIFORNIA.

With these four points of attack as a basis, what has been accomplished and is being done in this campaign? It should be understood that the Bureau of Venereal Diseases does not pretend to take credit for all that is being accomplished. Those things are stated which are the results of the campaign in which the Bureau has taken an active part.

Law enforcement is now being actively carried out in every large city of the State. This means that police departments are seeking evidence against places conducted as houses of prostitution, that prostitutes are being apprehended, that district attorneys are generally making use of the red-light abatement law, and that police judges are giving jail sentences to guilty offenders. In many small cities there were still segregated districts where houses of prostitution were allowed to run openly. During the past six months these places have been closed. In each instance our Bureau has attempted to see that all inmates were properly examined, quarantined and treated. That this has had a marked effect on reducing the problem is shown by the police court records of San Francisco, where, in the Women's Court in October, before the campaign started, nearly 400 women were charged with crimes of moral turpitude, whereas, in February, only 85 appeared in court. This in spite of the fact that not only an efficient morals squad is continually working, but many federal investigators as well. The reduction in the number of prophylactic treatments in the various military and naval stations through the State is suggestive of the decrease in number of exposures resulting from the suppression of the prostitute.

In connection with this work, San Diego has appropriated over $25,000 for building, equipping and maintaining a special detention hospital. The medical work is done by a special staff organized under the Health Department; the hospital has thirty-two beds. Los Angeles has also equipped and is maintaining a special detention hospital. So far, about $30,000 has been appropriated, and it is under the charge of a special staff of the local health department.

San Francisco set aside a special ward in the San Francisco Hospital for isolation of these court cases and organized a clinic at the jail for examinations. In Oakland, Sacramento, San Jose, Fresno, Bakersfield and many smaller communities arrangements have been made for examination and isolation of these patients in the county hospitals.

In San Diego, Los Angeles and San Francisco arrangements have also been made for the examination, diagnosis and treatment of all prisoners in the city and county jails. Nearly 20 per cent. have been found to have syphilis when Wassermann surveys were completed, and nearly 50 per cent. to have syphilis and gonorrhea.

All military and naval stations in the State re-

port sources of infection to the State or local health authorities and a definite effort is made to apprehend and place the infecting individuals under treatment.

In England the expense of venereal disease clinics is lessened for the local communities by a subsidy from the Government to the extent of 75 per cent. of the cost of establishing local clinics. Such a plan as this has not been necessary in California. The Bureau is distributing free salvarsan for syphilitics, and this undoubtedly has resulted in getting more people treated. This, of course, is not in itself sufficient to insure the desired result, namely, the cure of every syphilitic, Up to April 1, 1760 doses have been distributed.

In San Francisco, in addition to the facilities for treating court cases, the five emergency hospitals have been opened for treatment of venereal disease cases.

In Los Angeles the County Hospital now admits all acute cases of syphilis and gonorrhea needing hospital care. A clinic has been organized in the County Jail, in which all prisoners are examined and treated. The dispensary already in operation as a men's night clinic has been given more rooms and equipment, and the service is now extended to women as well as men.

In Fresno the County Hospital is paying special attention to venereal disease patients; a social service department has been inaugurated which is in charge of follow-up work, and up to March 1 a total of 35 patients were being treated for syphilis. Fresno has enlarged its municipal clinic to include venereal diseases and has now a well-equipped department, with excellent laboratory facilities and a social service department. The dispensary is open two nights a week, as well as during the day.

In Bakersfield the supervisors have agreed to supply funds necessary to devote a ward of the County Hospital to venereal disease, and to supply the present County Physician with an assistant, who will take particular charge of this work.

Plans are under way for the opening of a municipal clinic in Stockton, Oakland and Riverside. Arrangements have also been completed whereby infectious cases can be treated under the direction of the local health officers, this particularly in small communities, salvarsan to be supplied by us on their requisition.

As an emergency, the Bureau has been able to offer the services of the State Board of Health laboratory to all army and navy posts for Wassermann tests. Many camps have taken advantage of this, as laboratory facilities in the camps have been insufficient. For several years California has had a law requiring reporting of venereal diseases, but only by initials or office number. In October these rules and regulations were amended to better cover the situation, and again at the March meeting amendments were made so that at the present time the rules and regulations conform generally to the standards suggested by the Surgeon General's office, and are being adopted by other States.

Briefly, notification is required by serial number furnished by the State Board of Health, said number to be made a part of the physician's record of the case. If the patient lapses from treatment, the name and address are to be reported to the State Board of Health. Provision is made for the compliance of minors as well as for preventing druggists from prescribing for these cases.

Patients known to be in an infectious condition and so conducting themselves as to endanger others may be placed under quarantine. A further explanation of the rules and regulations will be made in a circular letter to be addressed shortly to all members of the profession which will be the inauguration of a definite campaign to enforce the law in this regard.

The Bureau has issued and distributed to physicians several thousand copies of a pamphlet on syphilis and its treatment. A pamphlet on syphilis and gonorrhea, with information and instruction to patients, has been issued and over 10,000 distributed. There is now a rule that every such patient shall be given one of these pamphlets. Members of the staff of the Bureau are frequently asked to address clubs or other groups of men or women, and this offers opportunity for considerable educational work. Plans are being made for definite courses of lectures in various parts of the State, and an exhibition is being planned which will tour the State. There will be an attendant, who will answer questions and give advice. A particular effort will be made to advertise in each place the local dispensaries. Literature will be distributed.

The Bureau has co-operated with the Commission on Training Camp Activities by arranging for physicians to give supplemental lectures in the army and navy camps. These men are officially accredited by the Commission and the Bureau pays their expenses. The lectures follow a standard syllabus issued by the Surgeon General's office and are illustrated by stereopticon slides. Up to date such lectures have been given at Camp Kearny, Camp Fremont, the naval training stations at San Diego, San Pedro, Mare Island and San Francisco. It is estimated that not less than 45,000 men have been reached by these lectures.

The Bureau has purchased and is lending a stereomotograph to the Army. This is at present at Camp Kearny. It shows automatically a series of 52 slides illustrating much of the pathology of syphilis and gonorrhea, and giving considerable information in reading material. It has been in use for several weeks, and the entire command will have had opportunity to benefit by this instruction. The psychology of this method of presentation is excellent, and Colonel Murray, the Division Surgeon, has expressed himself as particularly pleased with it. Several thousand placards for use in comfort stations and latrines have been issued by the Bureau. These have been supplied to Camp Kearny, Camp Fremont, Army Aviation Camp at North Island, San Diego; Presidio, San Francisco; Fort Winfield Scott, Mare Island, Naval Training Stations at San Diego, San Pedro and San Francisco. They contain a few brief statements concerning syphilis and gonorrhea, a warning against quacks and fakers, and drug store treatment, and in the case of those supplied to civil communities directions as to where free treatment and advice can be had.

In conclusion, we desire again to emphasize the need of recognition of the complexity of the venereal disease problem. A determined and a continuous campaign must be waged against commercialized prostitution, as it passes from the segregated district and the open brothel to the hotel, rooming-house, automobile and roadhouse. And with all of these there is the street-walker. Energetic and willing civil officials can reduce both the volume and the intensity of this traffic to a minimum, and infections will decrease as the source is made inaccessible. Adequate facilities for diagnosis, treatment and control must be at hand for every class of patient. The knowledge of the prevalence, dangerousness and need of long-continued treatment must be spread broadcast. The role of liquor and idleness and the lack of clean recreational facilities should not be forgotten. The complete success of the work depends very much upon the closest co-operation of all concerned, and not upon the activity of any single group.

LABORATORY TECHNIQUE CARRIED OUT IN STUDIES OF LOBAR PNEUMONIA IN BASE HOSPITAL LABORATORY, CAMP LEWIS, WASH., WITH REPORT OF SUBSTITUTION OF RABBITS FOR WHITE MICE, IN DETERMINATION OF PNEUMOCOCCUS TYPES.

By CAPTAIN KENNETH J. STANIFORD, M. R. C.
(Fresno, Cal.), Chief of Laboratory Service,
Base Hospital, Camp Lewis, Wash.

Pneumococcus Type Determination is being carried out in this laboratory, both by agglutination and precipitin reactions. Experience has shown that of the two procedures, the precipitin reaction offers numerous advantages over the other, and is of such delicacy as to justify its routine use alone, in type determination, in the event that mice or rabbits are not readily obtainable.

It has been found in this laboratory that rabbits can be very satisfactorily substituted for white mice for agglutination tests, these animals having been used here for several months with excellent result. Half-grown rabbits are most suitable. The use of food animals is an objection to which we have given due consideration, but the importance of the work in question seemed to us to be sufficient justification for their employment at a time when white mice were not obtainable.

It is the intention to use precipitin tests as routine in the future, and to make use of rabbits only when it is thought there is special indication for more exhaustive study.

In order to expedite the laboratory work which is of diagnostic, prognostic and therapeutic value in relation to the respiratory infections, the following procedure has been instituted by the laboratory:

All laboratory examinations of specimens from cases of pneumonia—particularly lobar pneumonia—including sputum, urine, blood (cultures and counts) and pleural effusions have been made by a "Pneumonia Unit" of workers rather than in various departments of the laboratory, which would necessitate getting the different reports together later, and offering the probability of confusion. In the present "unit," the work is centralized and the workers are consequently familiar with the various phases of the case in point. This provides a standardized routine, which functionates as follows:

A. The laboratory is notified immediately upon admission to a ward of a case with a tentative or absolute diagnosis of lobar pneumonia.

B. One of the unit workers at once provides a sterile petri-dish and gives proper attention to the securing of a satisfactory specimen of sputum.

C. Another unit worker makes, immediately, a complete blood count and takes blood for a blood culture.

D. Instructions are left with the ward-master to send a specimen of urine to laboratory at earliest possible moment. (Special containers are provided for this purpose, and it has been so arranged that the laboratory office clerk, upon receipt of such container with urine, delivers it directly to the unit, and not to the routine urine department.)

The above routine has resulted in many advantages. Frequently, several hours' time are saved in submitting a report to the ward surgeon than would otherwise be the case. In some cases several days' time are saved, as the early practice of routine blood culture, complete blood count and urine study make it possible for the ward surgeon to have the first complete picture presented by the laboratory usually not later than the first day following the admission of the patient. With this routine in operation, the type determination of the pneumococcus can be frequently reported upon the same day that the patient is admitted. Early treatment with specific serum in certain instances can be instituted accordingly. As for the benefits to the laboratory service, we have found that our work has been greatly simplified through this standardization. Furthermore, in the event of a serious number of pneumonia cases arising in this cantonment, the situation could be much more promptly and efficiently met.

This report has dealt specifically with acute lobar pneumonia. In the studies made, streptococcic infection of the lung, with subsequent pleural involvement (purulent effusion accompanying) and also involvement of the pericardium (at times, also with purulent effusion) was frequently noted, blood cultures frequently showing streptococci.

The unit work is carried out in other respiratory infections as well as in the case of lobar pneumonia.

Standardized technique being observed in pneumococcus type determinations in this laboratory are as follows:

TECHNIQUE FOR PNEUMOCOCCUS TYPE DETERMINATION.

Procedure: Collection of Sputum:

This is one of the most important steps in the preparatory technique. Due importance will only be given this proper collection of sputum, after

one has had numerous sad experiences in obtaining results which are valueless. The sputum must be of bronchial origin and as free as possible to obtain from contamination acquired in the upper respiratory passages, if reliable results are to be had. The "mouth-types" of organism encountered in working with sputum which is from the upper passages or which has become contaminated from such source, will give rise to much confusion and annoyance and necessitate doing the work over again.

Upon receipt of the sputum (in sterile petri-dishes) in the laboratory, it is examined grossly for any excessive amount of salivary secretion, and if such is present, the specimen is discarded and another is requested. If the material is apparently of proper origin, two direct smears are made.

Preliminary Examination of Smears.—One of these smears is examined by Grams Method in the usual manner, and the other by a slight modification of Hiss Capsule Staining Method.

Stain—Saturated alcoholic solution of Fuchsin (or Gentian Violet), 1 part.
Distilled water, 19 parts.

Method of Staining—After thorough air-drying (do not fix by heating in flame) the smear is treated with the stain and heated to steaming—not boiling—for 20 to 30 seconds. The stain is then washed off with 20 per cent. copper sulphate solution and the slide dried by blotting—no water being used. In our work, this method of capsule staining has proven more consistently satisfactory than the other methods which are in common use.

Selection and Washing of Sputum—About 1 c.c. of carefully selected sputum is drawn into a large sterile pipette from the Petri dish and is introduced into a test tube containing about 5 c.c. of sterile normal salt solution. The sputum is carefully washed by means of the pipette and by agitation. The sputum is transferred from one to another of from five to seven tubes of salt solution, the same treatment being carried out in each of the tubes.

Maceration of Sputum—The washed sputum is now thoroughly ground up in a sterile mortar with a small quantity of white sand (which has been sterilized). The mortar and pestle are prepared by cleansing with boiling hot water, then by rinsing with alcohol, and finally by igniting the alcohol.

While the sputum is being ground, 2 c.c. of plain bouillon are added drop by drop, until a complete emulsion is obtained. About one-half of this emulsion is used for rabbit inoculation and the remainder is used for inoculating the special culture media or "artificial mouse" for precipitin tests.

Rabbit Inoculation—In general, the technique is similar to that used for white mice.

Procedure: One-half of the above-mentioned emulsified sputum is injected intra-peritoneally into a rabbit, preferably a half-grown animal, the usual precautions of this technique naturally being observed.

In case of virulent types of pneumococci, the rabbit usually dies within 18 hours; if the animal does not die within this length of time, it is killed and an incision about half an inch in length is made in the abdominal wall. With platinum loop, material is obtained from peritoneal cavity for inoculation of special culture media to be described, and for smears which are stained by the Gram Method and the Hiss Capsule Stain.

If little or no fluid is noticed in the peritoneal cavity or on the surface of the viscera, about 20 c.c. of sterile normal salt solution are used in washing out the cavity. This is pipetted off into a sterile test tube, and centrifuged at low speed for one minute, and the supernatant fluid decanted into another centrifuge tube. This, in turn, is centrifuged, but at high speed, and until clear. A Precipitin Test is run directly on the clear supernatant fluid. Treatment with bile is unnecessary, as organisms have been removed by centrifugalization. The sediment remaining when the fluid has been decanted from the tube is diluted with normal salt solution, drop by drop, until a slightly opaque emulsion is obtained.

An Agglutination Test is then made with this opaque emulsion as follows:

Four tubes are set up in rack and series. These tubes are of the small type commonly used in the Wassermann Test.

Into each of the four tubes 0.5 c.c. of the opaque emulsion is pipetted.

Thoroughly shake each tube. Incubate at 37.5 C for from one-half to one hour, after which time it should be possible to make readings, which are made in the usual manner.

Readings of Agglutination Reactions with types of Pneumococci are, as a rule, more pronounced than with the Precipitin Reactions, although the latter are frequently more sensitive.

In using both the Rabbit Method and the Artificial Mouse Method of type determination of Pneumococcus, we have found all tests to coincide. In other words, the Precipitin test on sputum inoculated media, on the supernatant fluid from rabbit peritoneal washings, and the agglutination test on the *sediment* from the peritoneal washings have all given the same result.

(The pericardium of the rabbit is opened, and heart blood taken from the right auricle. A smear of this blood is stained by the described Hiss method and a tube of the special culture media to be described is inoculated. The latter procedures are for the purpose of control and further studies of the organism.)

SPECIAL CULTURE MEDIA METHOD (for Pneumococcus Grouping) AFTER AVERY.

Of the emulsified sputum, one-half was used for rabbit inoculation.

The remaining half is used to inoculate special culture media, preparatory to the carrying out of Precipitin Tests for Pneumococcus grouping as follows:

This emulsion, about 1.5 c.c., is pipetted into a tube containing 4 c.c. of 1 per cent. Glucose Meat Infusion Bouillon—reaction from plus 0.3 to plus 0.5 to phenolphthalein—to which 0.3 c.c. of defibrinated human blood has been added.

The inoculated tube is then incubated at 37.5° C for from five to seven hours, after which time two smears are made and stained by the Gram and Hiss methods as mentioned before. (The Hiss stain is used in making studies of the presence of Pneumococci frequently recovered from various cultures, contrary to the usual teaching that they are to be demonstrated in cultured organisms only in occasional instances.)

If, after incubation, the red cells have not all settled to the bottom of the tube, the tube is centrifuged at low speed for two minutes, and the supernatant emulsion is transferred to a sterile centrifuge tube. To this emulsion is added one-fifth its volume of sterile ox-bile, and the tube is placed in the water bath at 37.5° C for twenty minutes for bile digestion and for observation of *degree of bile-solubility.*

The emulsion is then centrifuged at high speed to throw down any bile-insoluble organisms or foreign substances which may be present. A smear is made from the sediment thus obtained and is stained by Gram method. If any organisms are demonstrated in this smear, a Glucose-Serum-Agar slant or Blood Agar Plate is inoculated, as control study. After centrifuging at high speed until clear, this supernatant fluid is treated as follows:

Four sterile Wassermann tubes are set up in series and into each is pipetted 0.5 c.c. of the bile treated supernatant fluid.

Absence of Precipitin Reaction in all four tubes indicates Group 4 Pneumococcus, or absence of Pneumococci in culture. REMARK: In our work on Type Determination, we have had a number of cases (of lung infection due to the Streptococci, which were clinically cases of lobar pneumonia) in which we obtained Streptococci when the Precipitin Reaction Reading was Group 4 or negative. These were cases in which the direct smears from the sputum showed organisms, morphologically Pneumococci and Streptococci. Smears examined from the inoculated and incubated media of these same cases showed the Streptococci predominating. These observations, in some cases, were subsequently borne out by examination of pleural exudate and blood culture. They were also consistent with clinical and autopsy findings.

The special culture media referred to is essentially the Avery Media. The only modifications are that human blood is used in place of rabbit blood, and the blood is not added to the bouillon base until ready for inoculation with the sputum emulsion. The blood is drawn into sterile flasks containing beads and defibrinated by this method, and is kept in these flasks until ready for use when 0.3 c.c. is added to each tube of the bouillon base to be used. The flasks of blood are carefully watched for evidences of Hemolysis or contamination, and the Glucose Meat Infusion bouillon is incubated both with and without blood. in control tubes, to insure sterility.

In the use of the Artificial Mouse, it is advisable to inoculate two tubes instead of one, for checking results and for protecting against accident in technique.

Complete blood count, blood culture, and precipitin test on urine are made in each case where type determination is requested on sputum. Pleural exudate is likewise examined, a Precipitin Test, a culture and smear being made in each case.

Add:—To Tube No. 1, 0.5 c.c. Anti-Pneumococcus Serum, Type 1 (diluted 1:20)			
To Tube No. 2, 0.5 c.c. Anti-Pneumococcus Serum, Group 2 (Undiluted)			
To Tube No. 3, 0.5 c.c. Anti-Pneumococcus Serum, Group 2 (diluted 1:20)			
To Tube No. 4, 0.5 c.c. Anti-Pneumococcus Serum, Type 3 (diluted 1:5)			
Add:—To Tube No. 1, 0.5 c.c. Anti-Pneumococcus Serum, Type 1 (diluted 1:10)			
To Tube No. 2, 0.5 c.c. Anti-Pneumococcus Serum, Group 2 (Undiluted)			
To Tube No. 3, 0.5 c.c. Anti-Pneumococcus Serum, Group 2 (diluted 1:10)			
To Tube No. 4, 0.5 c.c. Anti-Pneumococcus Serum, Type 3 (diluted 1:5)			
The Precipitin reaction is usually immediate, but if no reaction is noted, the tubes should be placed in the incubator for 30 minutes.			
Readings:—			
Precipitation in Tube No. 1 indicates		Type	1 Pneumococcus
Precipitation in Tube No. 2 and 3		Group	2 Pneumococcus
Precipitation in Tube No. 2 and not in No. 3		Sub-group	2 Pneumococcus (a, b, x)
Precipitation in Tube No. 4 indicates		Type	3 Pneumococcus

CONCLUSIONS.

1. A unit within the laboratory is of the greatest service in carrying out whatever laboratory examinations are required in a case of pneumonia, in addition to the special study of the sputum. The work is thereby centralized in the laboratory and is more comprehensive in its final result. Other departments of the laboratory are relieved of work which would be, if referred to them, simply "routine work."
2. This technique insures early diagnosis of pneumonia as to types and of complications (as may be determined by finding of streptococcus in blood culture).
3. Rabbits are satisfactory substitutes for white mice in pneumococcus grouping.
4. Precipitin reaction offers a dependable means of determining types or groups of pneumococci, when white mice or rabbits are not available.
5. Pneumococcus type determinations should be carried out in every case of pneumonia, and every laboratory should be prepared to carry out the necessary technique, and that without delay.

6. The precipitin reaction makes possible a much earlier determination of pneumococcus type than with agglutination reactions when it is necessary to await infection of the animal. It is possible to report type determination by the precipitin method within six hours of the delivery of the specimen of sputum to the laboratory, under suitable conditions.

I wish to take this opportunity of acknowledging the credit due Lieutenant Frank E. Smith, who has had immediate supervision of laboratory studies of the respiratory infections in this hospital during the past few months. I wish also to express my deep appreciation to the other officers and to the corps men whose enthusiastic co-operation and untiring efforts have made possible the organization and standardization of this department of the laboratory.

CEREBRAL ŒDEMA IN INTRACRANIAL TRAUMA.*

By ANDREW STEWART LOBINGIER, A. B., M. D., F. A. C. S., Los Angeles, California.

A steadily increasing number of injuries of the brain seen in this country, due to motor car collision, lends an especial interest to this subject. The war is contributing a mass of important data, as yet crudely classified, but material from which eventually intelligent conclusions may be drawn.

The importance of œdema in injuries to the brain has received a tardy recognition. This has been due partly to the overshadowing significance hitherto attached to hemorrhage; it has been largely attributable to the misinterpretation of intracranial tension and its vital relation to the centers of representation in the medulla.

Oedema in greater or less degree is dependent on the severity of the injury sustained. It is doubtful, however, if it ever fails to develop, except in the very mildest type of concussion. In severe concussion, in contusion, with or without fracture, as well as in depressed fracture, the resulting œdema, revealing its presence by changed intracranial tension, is the expression of a pathologic-physiology in the brain which should receive our serious attention.

Because we know the certainty of its occurrence and the very stubborn and slowly yielding character of the disappearance of œdema, more definite effort should be directed against its development.

As early as 1886 Sir Victor Horsley demontrated clinically that œdematous changes in the fundus could be relieved by trephining the skull, and at the International Congress in Berlin in 1890 he showed that the papillœdema associated with brain tumor was an evidence of intracranial tension which could be relieved by a decompressive operation on the skull and dura.

Beginning with the injection experiments of Manz in 1870 down to and including the researches of Cushing and Bordley in 1890, the mechanical element in the genesis of cerebral œdema has claimed a wide acceptance. The controversy over the identity of optic neuritis and papillœdema as waged between Deutschmann and Elschnig, and the constant and definite factors in the causation of intracranial and optic œdema as determined by the researches of Saenger, Von Hippel, and Thorner, and in this country by Cushing, are now chiefly historic.

An observation of singular clinical significance made by Horsley as early as 1884 and confirmed in 1886, and in a report on the surgical treatment of brain tumors published by him in 1895, showed that ipsolaterality of the lesion and œdema of the fundus was constant in about 75% of all his cases in Queen's Square. The value of this observation in localization is apparent. The anatomic boundaries of the falx and tentorium he believed to fully account for the physiologic expression of papillœdema on the side of the tension lesion.†

But he went farther. In his argument for the ipsolaterality of the lesion and papillœdema he very carefully mapped out the areas of the disc which were progressively invaded and the histologic changes in the nerve head. He demonstrated with photographic precision that the first invasion of the disc was a dilatation of the retinal veins on the upper nasal side which passes gradually downward and across to the temporal side. Following this is the blurring of the œdema which takes the same course and where the intracranial tension persists, becomes diffuse over the disc, developing a true papillœdema. The histogenesis was worked out with equally elaborate detail and his contribution to the changes in the fundus in intracranial tension, given at Belfast in 1909, remains the most brilliant classic in the literature of this subject.

The direct result of these critical studies has been to draw our attention more closely to the significance of trauma in the production of œdema. If, as Horsley found, the macrocytes and connective tissue corpuscles lying beneath the Mullerian fibres of the papilla, compose the pathologic histology of papillœdema, it is obvious we should find in the cytotic changes in the dendrons of the brain proper, analogous phenomena as a result of trauma. It is quite apparent we must look farther than the changes in the vascular mechanism of the brain for an explanation of œdema. The papillœdema which Manz was able to produce by the injection of a neutral fluid, and Cushing and Bordley by the swelling tension of a sponge tent, will not, in the light of our present knowledge of intracranial tension, explain the generally diffused pressure.

Trotter who classifies post traumatic œdema under "reactionary swelling" believes that "injury of the brain leads to œdema and swelling which in turn leads to pressure on the veins and venous obstruction. When this condition progresses below the tentorium into the vital centers the gravest effects are produced. In concussion of the brain the irritative symptoms coming on several hours after injury are due to this reactionary œdema." [1]

In 1916 Sargeant and Holmes made a study of 1239 patients in the London Hospitals suffering

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

† British Medical Journal, March 5, 1910.

[1] Wilfred Trotter, British Journal Surgery, 1915, II, 520.

from injuries to the brain sustained in battle. Their observation on postoperative disability is of singular interest. They found that while "the degree of disability was to a degree dependent upon the severity of the trauma, most of the paralyses, and sensory and visual disturbances noted in the earlier stages were due not so much to the result of destruction of brain tissue as to concussion, œdema, and vascular disturbances that extend beyond the site of primary injury." [2]

We have repeatedly seen in traumatic cases of delayed intervention, a generally disseminated opacity of the arachnoid and that significant obliteration of the cerebral sulci which gives to the cortex a blurred, flattened, diffuse appearance. It is a pathologic index which may be seen in its full development only in the living subject; six hours' post mortem it will rarely be seen. The delicate structure of the brain cells and the neuroglia distinguish them as highly susceptible to the hygroscopic changes which result in cloudy swelling. The trauma which can produce these changes need not be more than concussion. We have records of many cases where there was no evidence discoverable by our present methods of examination which disclosed fracture or contusion, and in which the measure of intracranial tension developed was quite equal to that of the severer lesions. This pathologic index may be transitory or it may be a progressively developing tension which will end in a lethal œdema of the medulla. The degree of trauma, as we may estimate or measure it, it must be remembered is not an infallible index to the intracranial tension. How may we determine this? There are now certain dependable evidences which will guide us: A patient sustaining an injury to the cranium sent in with a pulse of 120 or over and with evidences of shock may be taken as the usual type. During the first few hours an effort should be made to keep the patient perfectly quiet, with ice cap to the head, warm bottles in the bed, and warm salt solution and coffee by enema. Opiates should be avoided if possible. As soon as possible we should determine the blood pressure and the condition of the optic disc. Every effort should be made in this examination to disturb the patient as little as possible. If the vascular balance becomes established, the blood pressure will rise and as it does so the pulse will slow down. If the pulse falls below 60 in the adult or 80 in the child, the fundus should be observed under a transitory mydriatic every few hours. The constancy of the increasing disparity between the blood pressure and the pulse rate will be accurately reflected in an increasing œdema of the disc, the unerring evidence of introcranial tension. Confirmation of this tension will be determined by lumbar puncture and measurement by the manometer. When the index rises above 10 mm it is a plus tension. Usually in lumbar puncture we have a rose tinge to the cerebro-spinal fluid when hemorrhage results from the cranial injury. This however is not absolutely constant, and in fractures of the frontal vault the fluid taken by lumbar puncture may be clear.

[2] P. Sargeant and G. Holmes, Jour. Royal Army Corps 1916, xxxvii, Sept.

When 20 cc of cerebro-spinal fluid is withdrawn there is a drop in introcranial tension, as the manometer will show. But as long as the lesion remains unrelieved, the effusion and œdema will be persistent and the index in the fundus remain but slightly changed.

A linear fracture, which does not become compound by communicating with external cavities, such as the ear, pharynx, or nasal sinuses, is more or less of a negligible factor in cerebral trauma. The contusion to the brain structure and the punctate hemorrhages and œdema which result from this traumatism are the overshadowing factors in determining our course of action; so that except in compound, comminuted and depressed fractures, and massive hemorrhages which call for immediate intervention, a deliberate analysis of the evidence of œdema in intracranial pressure is of paramount importance. There is abundant reason to believe that the presence of a clot as well as spicula of bone in depressed fracture are productive of an intracranial tension extending far beyond the radius of their respective pressures. That this tension is due to a widely disseminated œdema, which, as Manz and Cushing proved, was always the concomitant of a localized pressure and irritation, there seems not a reasonable doubt. We must, therefore, conclude that intracranial tension, accompanied or not by massive, superficial or substantive hemorrhages, may be the physiologic expression of a traumatic œdema; that its occurrence is propably constant and that its clinical significance is vastly greater than that of hemorrhage itself, which very frequently is localized and from which cerebral œdema may be a definite consequence.

The treatment of cerebral œdema will always consist in the safe and definite relief of introcranial tension. The indications for surgical intervention must be determined by the evidences of progressive tension, the physiology of which is quite well understood. Operation should never be done when the pulse is increasing in frequency. It should be done before the œdema has extended below the tentorium and seriously depressed the centers of representation in the medulla. The selection of the proper time to operate is as vital as the choice of the operative measure for relief. The time has gone by when we can condone a delay which will result in blindness from a hopeless papillœdema or a lethal result from œdema in the floor of the fourth ventricle. The surgeon competent to do brain surgery should be permitted to elect the time and if possible choose the environment in which operation shall be done. The surgeon has a right to stress this point with emphasis. There can be no question that an unnecessary mortality in the past has come from operating either too soon while the patient was still in shock, or too late, when a general œdema had overwhelmed the centers in the medulla.

The value of withdrawal of cerebro-spinal fluid by lumbar puncture will depend somewhat upon the location and extent of the traumatism. There is always the danger of withdrawing an excessive amount and having the medulla collapse into the

foramen magnum. Twenty cc should not be exceeded at one sitting, and unless the pulse, blood pressure and fundus show early improvement from lumbar puncture, it should be abandoned. We are of the opinion that lumbar puncture as a measure to relieve intracranial tension has a very circumscribed field for its application, and because of its dangers and doubtful efficiency it should be employed only by one whose judgment, experience and skill are unquestioned. A safer measure where plus tension is very high would be venesection, and this also should be restricted in its application.

Cranial decompression, first suggested by Horsley and later perfected by Cushing, offers the most dependable relief in acute œdema of the brain. It is not an ideal procedure and leaves much to be desired in the exposure to trauma and adhesions at the site of operation. But it is distinctly a life-saving measure, and when done with the care and skill which should characterize every operation on the brain, its lasting benefits far outweigh its possible complications.

We should remember that no patient is certain to be quite a hundred per cent efficient who has suffered a serious brain injury. A subtemporal decompression done at the proper time for œdema may save a patient's life; it may restore him as a useful member of society, but it rarely returns to the patient more than 75 or 80 per cent. of his former mental and nervous competency. Many of these patients remain irritable and emotional through the balance of life; we have done very much for them if we are fortunate enough to diagnose the lesion and operate for its relief early enough to save life and vision.

SARCOMA OF THE CHOROID WITH REPORT OF TWO CASES.

BENJ. F. CHURCH, M. D., Redlands, Cal.

My object in reporting these two cases of sarcoma of the choroid is to call attention to the clinical findings in the presence of orbital neoplasms and the differential diagnosis between these conditions, during their early stages, simple detachment of the retina and acute glaucoma.

All agree that sarcoma of the choroid is a grave affection and that the only chance for the patient's life lies in an early diagnosis and enucleation of the eye. In simple detachment of the retina the clinical course is about as follows: The detachment occurs rather rapidly. Upon ophthalmoscopic examination we find a clear vitreous with a sacculated spot in the retina, vision reduced out of proportion to the local condition found and, in the early stage, usually grows progressively worse. During the early period of detachment of the retina, which accompanies sarcoma of the choroid, the clinical symptoms are identically the same as found in simple detachment.[1] This similarity is not long maintained. Pressure symptoms invariably occur, at indefinite periods, after a detachment due to ocular growths, but does not take place in simple or primary detachment.

According to Fuchs,[2] tumors of the choroid are divided into four stages. In the first stage the tumor is small and manifests itself only in ophthalmoscopic examination by detachment of the retina at site of the growth. The detachment and corresponding blindness slowly or rapidly progresses. The eye at this time, externally, is normal to all appearances. The second stage is ushered in by an increase of tension and general appearance of inflammatory glaucoma. Marked injection of the eyeball, severe pain and clouded cornea is present. Later on, the lens becomes clouded and we have a picture of glaucoma absolutum. As this condition corresponds completely to the complex symptoms of inflammatory glaucoma, a correct diagnosis at this time is very difficult or impossible to make. The third stage is that of the tumor breaking through the tunics of the eye. The fourth stage is that of generalization of the tumor by development of metastatic nodules in the internal organs, most frequently in the liver.

Fortunately, in a few cases, in the earlier stages, we can recognize through the retinal vessels of the choroid or of the tumor and also the yellow or brown color of the latter. In this case the diagnosis of sarcoma of the choroid is easily made. Later, however, on account of the disturbance in the circulation of the choroid, produced by the growth, an accumulation of fluid takes place between the choroid and the retina, which precludes a view of these vessels through the retina. In this statge the tension of the eye affords a very important diagnostic point.

In simple serous detachment of the retina tension is reduced early in the disease, while in detachment due to a tumor it is at first normal and afterward increased. Sarcoma of the choroid is a rare disease. It is found most frequently between the fortieth and sixtieth years. Simple detachment of the retina is somewhat common.

Especially would I lay stress upon a positive diagnosis before the performance of posterior sclerotomy, advocated by some, for the removal of the fluid in simple detachment. Pressure symptoms being thus removed or prevented may delay the discovery of the true cause of the detachment.

REPORT OF CASES.

Case 1—Mrs. S., age 38, weight about 160 lbs. Apparently in perfect health. Had never suffered any serious illness. Family history negative. Seen at office March 5, 1914. Complained of failing vision in the left eye for the past five or six months. Central vision nil. Objects distinguishable in field. Vision in right eye normal.

Ophthalmoscopic examination revealed a typical picture of simple detachment of the retina. Patient placed in the hospital and given sub-conjunctival saline injections, pilocarpine and laxatives. Patient left hospital in two weeks, vision at this time being slightly worse than when she entered, and returned to her home in an adjoining town. No perceptible change in the fundus at this time except an extension of the detachment. On June the 11th, nearly three months later, she returned

1 Thompson and Curtin, Section on Ophthalmology 1915.

2 Text Book of Ophthalmology.

complaining of severe pains in the eye, which exhibited all the symptoms of acute glaucoma. The symptoms, accompanied by severe pain, were much worse upon the following day and continued until the third day, after the onset of the pain, when the eye was enucleated. Section of the eye revealed a small pedunculated tumor about six m. m. in circumference, which was attached to the choroid five or six m. m. from the optic disk. This proved to be a melano-sarcoma.

Examination of the fundus after the onset of pressure symptoms was unsatisfactory on account of cloudiness of the cornea and media of the eye, yet thought I could distinguish, through the retina, vessels of a growth. My principal reliance for the diagnosis was in the glaucomatous symptoms. In a few days after the eye was enucleated, as a safeguard against metastases, the patient was given Coley's fluid hypodermatically daily for one week. The initial dose being one-fourth of a minim and gradually increased to two and three-fourths minims to the dose at the end of the week. The patient now, four years later, is comfortably wearing an artificial eye and has no evidence of an extension of the disease.

Case 2—Mrs. P., age 40, a farmer's wife. Robust health. Came to me on May 5, 1912, for refraction of her left eye, stating that she had lost the sight of her right eye several months before. Examination revealed a large detachment of the retina which was recorded as such and no treatment instituted. More than one year later I was called to her home and found her suffering great pain. Eye hyperaemic with high tension. Unable to see the fundus on account of cloudiness of vitreous. A diagnosis of acute glaucoma was made. Patient being unwilling to go to the hospital for operative treatment, vigorous use of hot stupes, eserine and dionine relieved the pain and hyperaemia in due time, though the cloudiness and some tension remained, when I saw her last, two or three weeks later.

Nothing more was heard from the patient until September of last year, which was four years after I had seen her with the glaucomatous symptoms. She then complained of pain in the blind eye. The globe was hyperaemic, sensitive to touch with some increase of tension. Well up under the upper lid there was a black sacculated protrusion of the sclera. I advised immediate enucleation. This, she refused until one month later. Firm adhesions to thickened tissues of the upper part of the orbit were found. The globe was smoothly enucleated without attempt to remove the adjacent tissue. Complete healing took place in due time and an artificial eye was introduced which the patient has comfortably worn for six months. The larger part of the globe was filled with a black tumorous mass which proved to be melano-sarcoma.

Up to this time no evidence of local or metastatic extension of the disease has occurred. This sad ending will, in all probability, take place sooner or later. In the first case, as the eye was removed very soon after the growth started, and four years having elapsed, we may reasonably hope for no further trouble. Of this, however, we are not certain as recurrence of this character of growth has occurred after the lapse of seven years.[3]

THE PASSAGE OF DRUGS FROM BLOOD SERUM TO THE SPINAL FLUID.*

By HENRY G. MEHRTENS, M. D., San Francisco.†

In the treatment of diseases of the meninges it is obviously of the greatest importance to be able to cause drugs, and other substances, to pass from the blood stream into the spinal fluid. While the meninges are intact these attempts have met with very small success, except with hexamethylenamin and occasionally with uranin. The possibility of arsenic being able to penetrate seems very doubtful. Sicard and Block, Benedick and others have found traces in the spinal fluid following the intravenous injection of salvarsan, others including the author have been uniformly unsuccessful. This discrepancy may be accounted for by the varying state of meningeal irritation of the syphilitic patients, who furnishes the material for most of these studies.

As early as 1902 Leri as well as Orefici and Cruchet noted the presence of iodide in the spinal fluid of patients suffering with tubercular meningitis who had previously received iodide by mouth. Rotky also was able to detect bromide in the spinal fluid of a patient suffering with meningitis who had received bromide by mouth for a considerable time. None of these authors were able to find either iodide or bromide in the spinal fluid of normal patients. From these observations it would seem that inflammatory disease of the meninges causes a "let down" of the barrier separating blood from spinal fluid, whether at the choroid or elsewhere. Attempts have also been made to reproduce this state by the introduction of irritating substances into the subarachnoid space, such as cyanide of mercury, horse serum and homologous serum. Simple drainage of the spinal fluid following salvarsan, was advocated in America by Pillsbury. Barbat found arsenic in the spinal fluid following a thorough drainage of sub-dural space. In a series of 30 cases treated at Lane Hospital the results of this method (salvarsan following drainage) were definitely inferior to those of the Swift Ellis treatment judged by both subjective symptoms and ability to produce a permanently normal spinal fluid.

All of these observations were more thoroughly explained by the work of Flexner and Amos in their work on poliomyelitis. They showed that anti-bodies and even the virus of the disease might be drawn from the blood serum to the spinal fluid following the introduction of certain irritants into the subarachnoid space. Especially significant was their finding that these irritants might be graded in the order of their potency. Horse serum was found most potent, then heterologous, homologous serum, hypo-tonic and hyper-tonic saline solutions, and least irritating of all was drainage of the cerebrospinal fluid.

It is interesting to consider how these newer

3 Fox, Practical Treatise of Ophthalmology.

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

† From the Neurological Clinic of Stanford Univ. Med. School.

ideas in spinal pathology have been utilized in our treatments of diseases of the meninges. The intradural methods of Swift Ellis, Ogilvie and Byrnes all tend to place the emphasis upon injecting arsenic or mercury more or less diluted in serum, into the spinal canal. They depend upon diffusion or the circulation of the spinal fluid to bring the injected substance in contact with the pathological lesion. Practically these methods have produced undoubted clinical results, but it well may be that their success may depend on factors other than those given out by their author.

The introduction of the patient's own serum into the subarachnoid space produces an irritation manifested by a pleocytosis frequently as high as 1800 cells per cu. mm. Even drainage of 30 to 50 cc. of spinal fluid may be followed by a mild reaction of 10 to 80 cells. Following the ideas of Flexner and Amos, it seemed possible that this irritation of the choroid would enable drugs and anti-bodies to pass into the spinal fluid for a period of 36 hours.

In order to secure exact information on this point, we attempted to bring sodium iodid from blood to spinal fluid. This drug was chosen for two reasons, first, because it had been definitely proven by numerous observers including Catton that sodium iodid will not penetrate the normal choroid; secondly, because it can be maintained in the blood in considerable concentration with little distress to the patient.

Our technique in brief consisted in injecting 50 grains of sodium iodid in a 10% solution (according to the formula of Klemperer) intravenously every half hour for four injections. One hour after the last injection, 12 cc. of spinal fluid was removed, a cystological examination was made and the fluid was examined for iodine by Mr. C. G. MacArthur of the Pharmacological Department of Stanford University. In these 10 control cases no iodid was found.

In the next group of cases (8) the same routine was followed except that 10 cc. of horse serum was injected into the subarachnoid space six hours before the intravenous injections of iodid. The resulting spinal fluids in six cases showed intense irritation in some cases up to 16,000 cells per cu. mm.—in two cases practically no reaction was obtained. Those cases showing the intense reaction gave definite tests for iodine in the spinal fluid. The two cases showing little or no reaction gave negative tests for iodine.

These results would seem to point to the irritation of the meninges as the essential feature in producing the permeability for iodid.

In another series of cases which will be reported in a subsequent communication, we are attempting to make a quantitative estimation of the arsenic reaching the spinal fluid from the injection of salvarsan where a preliminary injection of horse serum has been given.

These results while of interest from the standpoint of the particular drugs studied are of more importance when viewed in relation to the general methods of intradural medication. If, by these experiments, it seems evident that by an injection of horse serum the night before, sodium iodid may be made to pass from blood to spinal fluid, why should we not use this simple and direct method in our attack on the spirochete located in the meninges? In other words, if horse serum, or preferably the patient's own serum, were given the night before, time allowed for an aseptic reaction to develop, then salvarsan given intravenously, we could obtain the advantage offered by the introduction of the immune bodies present in the patient's own serum and at the same time secure free communication for the penetration of the drug.

We are now treating a series of cases in this fashion in the Neurological Clinic, Stanford University Medical School. It differs from the Swift-Ellis treatment only in reversing the order of the technique—i. e., giving the spinal injection of the patient's own serum, first, with or without the addition of mercury, and following this six hours later by an intravenous injection of salvarsan. While the results seem very encouraging, the series is still too small for an accurate comparison of the merits of this with the older intradural methods.

Discussion.

H. D'Arcy Power: In listening to the papers that have been given and the discussion thereon, I am impressed with the fact that the physiology of these experiments has not been very fully considered. Speaking to one of the writers I gathered from his remarks that in some way or other it was expected that if fluid be withdrawn from the spinal canal a negative pressure would be induced that would cause the absorption of material from the surrounding lymph, by what might be termed a process of mechanical filtration—that is to say, that the meninges would act as a permeable membrane permitting the passage of material like a solution passes through filter paper. It seems to be overlooked that this is not the nature of living tissues, on the contrary these surfaces are covered by an intact physiological membrane made up of separate cells every one of whom is only semi-permeable and not permeable to matter in solution. There is therefore, wherever such surface is intact, a biological selective power which determines whether or not a given salt shall or shall not pass through the membrane. We might very well understand the results obtained by accepting this view, that where fluid does pass in consequence of a disturbance of the intra-meningeal condition such as by the taking out of a large quantity of fluid, or by the introduction of horse serum, or arsenic, that some of the cells lining the meninges, very delicate as they are, suffer such injuries that they undergo necrobiosis, and in every point where a cell so dies, the membrane becomes permeable by removing it from the biological into the physical category. It is only when we properly study the physiology of the passage of solutions through the tissues of the cord that we can expect to make experiments which will have scientific results.

References.

Leri: Arch. Med. des enfants, 449, 1902.
Orefici: Ref. ins. Jahrbuch f. Kinderheil kunde, Bd. 1422, 1902.
Cruchet Compt. rend. de la Soc. de Biol., Bd. 54, 1422, 1902.
Rotky: Ztscher. f. Klin. Med., 1912, v. 75, 474.
Barbat: A. M. A., v. 70, p. 147, 1918.
Benedict: Quoted by Sachs, Amer. J. Med. Sci., v. 148, p. 698, 1914.
Flexner & Amos: Jour. Exper. Med., 527, April 1917.
Gai. Med. de Caracas, vol. 23, p. 185.

EFFECT OF PNEUMATIC HAMMERS ON HEALTH.

In accordance with its plan of eliminating as far as possible preventable diseases among workers in various industries, the United States Public Health Service of the Treasury Department has begun an investigation of the effect on the health of workers of pneumatic hammers as used in cutting limestone.

It has been learned that inconvenience is felt by workers in this industry in using the air hammers in soft stone because of a temporary numbness of the fingers whenever the hand becomes chilled. No serious consequences resulted from this disorder but it appeared well to find the reason of the condition and to see if it could not be remedied.

The most important cause was found to be the higher vibration rate of the hammers when used in soft stone, and the second cause the tight and strained grasp which the workers had to use. Cold weather brought out the symptoms, but was not in itself a cause of the condition.

By using a shank of larger diameter, which would permit a more comfortable grasp by the worker, it is believed that a good deal of the strain on the muscles would be relieved. If the shank were enlarged by using a tight-fitting covering of asbestos or some similar substance, the cold would not be intensified as at present by the metal, and the handle would act as a shock absorber.

Book Reviews

A Practical Text-Book of Infection, Immunity and Specific Therapy with special reference to immunologic technic. By John A Kolmer, M. D., Dr. P. H., M. Sc., Assistant Professor of Experimental Pathology, University of Pennsylvania, with an introduction by Allen J. Smith, M. D., Professor of Pathology, University of Pennsylvania. Second Edition Thoroughly Revised. Octavo of 978 pages with 147 original illustrations, 46 in colors. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $7.00 net; Half Morocco, $8.50.

In the second edition of Kolmer's book all the newer tests used in a modern immunological laboratory of the hospital or clinic and at the bedside are again minutely described in simple and lucid style. The treatise is of interest not only to the student or laboratory specialist, but it should also be consulted by the practitioner, because Kolmer makes easily accessible the main principles and the proper interpretation underlying the numerous tests on which he relies in his prognosis and in his therapeutic measures.

Among the many additions and alterations, particular attention has been paid to the Schick test for immunity in diphtheria, active immunization in diphtheria with toxin—antitoxin mixtures; complement fixation in tuberculosis and other bacterial infections, the standardization of a quantitative Wassermann reaction; tests to be used before transfusion for iso-haemo-agglutinins and iso-hemolysins and the Lange's colloidal gold test.

In the chapter on treatment of various infections, the importance of the nonspecific "shock" therapy is discussed, and the use of serum of convalescents and normal persons in acute poliomyelitis is fully considered. The field of chemotherapy is well covered, and the section on bacterial chemotherapy is a noteworthy summary in the light of our recent knowledge of antiseptics in the treatment of war wounds.

In the chapter on anaphylaxis, one misses the recent studies of Novy and DeKruif on anaphylatoxin, and again the discussion on allergic skin reactions gives the reader the impression that cutaneous hypersensitiveness is a function of anaphylaxis. Recent as well as old experiments have clearly shown that conditions which will sensitize an animal do not necessarily sensitize its skin. To bring about cutaneous hypersensitiveness, a focus of infection has to be produced. On the other hand, Kolmer clearly states that a positive skin test is evidence of infection or sensitization to a particular protein, probably without having any direct relation to resistance to infection or re-infection.

Aside from a few mis-spelled names of authors, the text is free from mistakes.

K. F. M.

Thyroid and Thymus. By André Crotti, M. D., F. A. C. S., LL. D. Published by Lea and Febiger, 1918. Price, $10.00.

This monograph, representing seventeen years' work, is undoubtedly the most complete and best treatise on the thyroid and thymus that we have in the English language. The author has been trained along both pathological and surgical lines—that his training has been good is manifested by the character of his work. As a pupil of Kocher, he inclines largely towards his views regarding the classification, pathology and treatment of goiter, yet he is thoroughly familiar with the extensive literature on this subject. He has very systematically considered the anatomy, physiology, pathology, symptoms, and medical and surgical treatment of the various diseases of the thyroid gland and, to a lesser extent, the thymus. In harmony with the views of McCarrison, who has recently published a book on thyroid diseases, he considers Graves' disease a form of toxic thyroiditis. He has, however, overlooked what seems to the reviewer a very important contribution to the study of hyperthyroidism. We refer to Goetsch's work on toxic adenomata of the thyroid—that the adenomata are more often responsible for the toxic symptoms, than are the remnants of thyroid tissue. This point has also been brought out in some of the publications of the Mayo Clinic. When, for instance, in a case of marked hyperthyroidism, without the symptoms of exophthalmos, we find a goiter consisting almost entirely of adenomata, with only a thin covering of fibrous thyroid tissue, it seems illogical to consider minute areas of hyperplasia in the thyroid as the cause of the symptoms. We are inclined to think that Wilson, who originated the theory, must have abandoned it.

The book is exceptionally well illustrated by original illustrations, many of them being in color. It is very readable throughout and though over 500 pages in length, there is no padding, nor any attempt to magnify the ego. It certainly ranks high among the monographs and will remain authoritative for a considerable number of years.

W. I. T.

A Text-Book of the Practice of Medicine. By James M. Anders, M. D., Ph. D., LL. D., Professor of Medicines and Clinical Medicine, Medico-Chirurgical College Graduate School, University of Pennsylvania. Thirteenth edition thoroughly revised with the assistance of John H. Musser, Jr., M.D., Associate in Medicine, University of Pennsylvania. Octavo of 1259 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $6.00 net; Half Morocco, $7.50 net.

Perhaps no better single volume on the practice of medicine can be had than this standard work which has been admirably brought up to date by the addition of such matter as the following: Treatment of tetanus, acidosis in diabetes, chylothorax, etiology of aortic incompetency, treatment of asthma, diverticulitis, functional tests of hepatic insufficiency, Gaucher's disease, estimation of renal function, anaphylaxis of food intoxication, pneumococcic infections, focal sepsis, ratbite fever, febris wolhynica and pyorrhea alveolaris. Also, a number of old subjects have been re-written, particularly the chapter on the nervous system by Dr. Chas. Potts. Too much can hardly be said in praise of this excellent work.

H. F. A.

Practical Dietary Computer. By Amy E. Pope, New York: Putnam. 1917. Price $1.25.

This volume contains 156 pages of closely packed tables on the following subjects: (1) food requirements, kind and quantity with reference to age, weight and sex; (2) carbohydrate, fat, protein, purin, calcium and iron content of certain food substances; (3) composition and caloric value of common foods and beverages; (4) diabetic foods; (5) carbohydrate equivalents; (6) recipes.

The book is of distinct value to the specialist, the general practitioner and the nurse. The information that it contains is so arranged as to be readily avaiable in practical every-day work.

W. K.

Hand-Book of Operative Surgery. By Wm. I. Wheeler. 364 pages. Third edition, New York: Wood. 1918. Price, $3.50.

An introductory note by Sir Alfred Keogh says: "The work itself is intended for junior practitioners in surgery, and assuredly there never was a time when guidance for the young surgeon was more needed."

The book was quite evidently originally written as a guide to a course in operative surgery on the cadaver. The classical academic operations, ligation of vessels and amputations are fully explained; other procedures, laminectomy, and operations on the heart and lungs, for instance, are not discussed at all. Over two-thirds of the work are given over to operations on the extremities. It describes mainly well-established procedures; some of its teachings, however, will scarcely meet with wide approval,—the use of chisel and mallet in osteoplastic trephining, the implantation of silver sheets to close defects of the skull, etc. The explanations are lucid and practical and the illustrations are good. The commoner operations of military surgery are so well described that it may be especially commended to younger medical officers who may be called upon to face surgical responsibilities with which they have had no previous experience.

L. E.

The Third Great Plague, a Discussion of Syphilis for Everyday People. By John H. Stokes, A. B., M. D., Chief of the Section of Dermatology and Syphilology, The Mayo Clinic, Rochester, Minnesota. 12mo of 204 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $1.50 net.

The leading thought of this work is that, in spite of all advances by medical science, in regard to syphilis people at large are still ignorant. The author urges the use of plain English when discussing syphilis, and we heartily agree with him when he says that "it is a direct move in favor of vulgar thinking to misname anything which involves the intimacies of life." We only hope that Stokes' plea to think of syphilis as a medical and sanitary problem only, and to separate, at least temporarily, the question from our thought about morals and allied questions will be considered.

Two statements, however, must be taken cum grano salis, the one (p. 78) that salvarsan "stirs the germs up before it kills them" and the other (p. 79) that 24 hours after a salvarsan injection "scarcely a living germ remains."

The author's recommendations for the systematic treatment and saving of a certain class of hereditary syphilitic children are very timely, and his sane views on the question of compulsory reporting will be endorsed by every thinking and fair-minded physician.

The work is well written and holds the interest; it is mostly intended for the educated lay reader, but should be widely read by physicians; even the experienced syphilologist, while finding no new facts, may learn how to talk to his patients, and mainly how to influence the large number of the "I don't care" class amongst them. V. G. V.

Treatise on Regional Surgery. By Various Authors. Edited by John Bairbairn Binnie. 3 volumes. Philadelphia: Blakiston, 1917. Price, $7.00 per volume.

It is easy to foretell a long life and many editions for this work. Binnie says in the preface that each collaborator has been urged to record personal opinions, rather than to state what others think. It is remarkable how uniformly the various writers have succeeded. Some may have even gone too far in considering their own personal hobbies and achievements. Many of them have interjected numerous case histories. To give space to such particular details is unwarranted in a book which aims to be—and is—a succinct exposition of essentials. A "case" is rarely of interest to others than the author.

Space prohibits the detailed review this work should receive. With few exceptions the articles are so good that it is easier to pick small single flaws than to give to them all just praise. The sections on genito-urinary surgery and neurological surgery are especially good. They give most useful information in borderline subjects, conservative and medical treatment, diagnosis, etc. Sir Robert Jones and others have completed an admirable orthopedic section. Only the chapter on surgery of the brain is wanting. Binnie says that he has omitted it for lack of a proper collaborator. It is a pity that this one chapter should be missing. It is to be hoped that the gap may be filled in later editions. It would be of advantage to set a short bibliography at the end of each chapter as Mayo has done in the chapter on the rectum, rather than scatter the references through the body of the reading matter.

The book gives just what is needed. It really fills a long-felt want. There has been nothing in English comparable to Wullstein-Wilms' text. Binnie and a list of men like Mayo, Sir Robert Jones, Bloodgood (and including Stillman and Rixford of San Francisco) have given us a work that will long remain the companion and guide of students and practitioners. It is far and away the best there is in the English language. It should forerun similar collaborative texts of internal medicine, gynecology, pathology, etc. L. E.

The Medical Clinics of North America. Volume 1, Number 4 (The Boston number, January 1918). Octavo of 401 pages, 128 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published bi-monthly. Price per year: Paper, $10.00; Cloth, $14.00. Contents:

Henry A. Christian: Complete heart-block. Partial heart-block with Stokes-Adams syndrome. Chronic myocarditis. E. P. Joslin: Severe diabetes. J. L. Morse: Empyema in children. W. P. Graves: Ovarian organotherapy. E. A. Locke: Osteitis deformans with sarcoma of humerus. C. J. White: Premature loss of hair. F. B. Talbot: Eczema in childhood. H. A. Barnes: Vincent's angina. A. W. George, R. D. Leonard, F. W. O'Brien: Roentgen diagnosis of disease of upper right abdominal quadrant. J. B. Hawes: Early diagnosis chronic ulcer stomach and duodenum. K. H. Thoma: Relation of teeth and jaws to general medicine. G. R. Minot: Pathologic hemorrhage. A. W. Sellards: Amebic dysentery and associated conditions. J. B. Ayer: Focal transverse lesions of spinal cord. R. M. Smith: Pyelitis of infancy. I. C. Walker: Cause and treatment bronchial asthma. G. W. Holmes: X-ray examination of heart and great vessels.

History of Medicine. Suggestions for study and Bibliographic Data, by Fielding H. Garrison, A.B., M.D., Principal Assistant Librarian, Surgeon General's Office, Washington, D. C. Second edition revised and enlarged. Octavo of 905 pages with many portraits. W. B. Saunders

Company, Philadelphia and London, 1917. Cloth, $6.50 net; Half Morocco, $8.00 net.

The second edition of this work is eagerly welcomed. The first appearance of the book filled a long-felt want. With the new edition, re-written and enlarged, we turn to the pages of an old friend for inspiration and encouragement. The excellent appendix makes the work of selection easy. Altogether, it is a book for every doctor, and a fitting gift for a colleague when you wish to express appreciation of some little kindness.

M. I. J.

Elements of Pediatrics for Medical Students. By Roland G. Freeman. 289 pages. New York: Macmillan. 1917. Price, $2.00.

This is a small handbook of facts, every one of which a medical student should know. It takes up in a concise manner the anatomy and development of the baby, and enters into the care and hygiene of theinfant. The chapter on nursery hygiene is particularly good. The subject of infant feeding is rather indefinite, as is usual in all textbooks. However, there is much sound sense in these few pages that briefly describe the different aids to diagnosis and the various methods of treatment. If well versed in the contents of this book, the student could not go far astray. It is especially recomended to the beginner.

F. M. H.

Correspondence

FROM DR. SHERMAN.

The New Willard,
Washington, D. C.,
May 4th, 1918.

To the Editor:

The Medical Section of the Council of National Defense called a meeting of its State Committees for the fourth of May here in Washington, and in response men came from every State in the Union. I have heard the members present estimated at over two hundred and fifty.

It has been my fortune to have been to a number of meetings in Washington, usually Congresses of Physicians and Surgeons, or meetings of the American College of Surgeons, and this meeting has resembled those in the personnel; I have met here much the same group of men as on former occasions. But there the similarity stops. There is in this gathering a tense earnestness and definiteness never found in others. There have been no scientific sessions, and no papers, of course; all meetings have been business meetings, and the buiness has been distinctly business, and more than that, it has been military business. Once in a while some member, yielding to an irresistible impulse, will get up and begin to tell what he thinks, or give information about how things should be done, and then no time is lost in telling him what the law says or what the orders are, and that the matter is settled. The meeting really is one for the information and instruction of the attendants, and but little is left for them to discuss, though a few matters have been settled by vote.

The purpose, of course, is to secure new men for the Medical Reserve Corps of the army. As I crossed the continent I read of the discussions in the Senate on increasing the army to 5,000,000 men, and since then we have been practically assured that the President will be empowered to call for as many men as he feels are needed, with no limit other than that. It is plain that a limitless army means a relatively limitless number of surgeons. That is where the Senate's action affects the medical profession.

Now, I had not forgotten—and the matter has been recalled here in the meetings—that the medical profession in the old committees, national and state, called the Committees of American Physicians for Medical Preparedness, was the first to begin to prepare back in 1913; and in the Surgeon General's office are still lists of medical men, made up at that time in the different states, California included, of medical men and their special trainings or specialties, so that he might have them at hand in the case of a need. This forwardness of the medical profession must not be forgotten by us, for it set us a mark up to which we must live now. To meet the demand for medical men which the increased size of the army will make, every medical man who has the moral, mental and physical qualifications and the proper training to enter the army must do so, unless he is absolutely indispensable to the civil population as practitioner, sanitarian, hospital attendant or teacher, **and no man must think to settle the question of this indispensability himself.** Do not imagine for a minute that this means coercion or a draft. The former would not coerce, and the latter the Surgeon General has forbidden. It means that every man must, in some way, get the same viewpoint and feeling that those of us who came here have gotten. That was easy for us to get. The facts of the matter were cold facts which were told us by the officials of the Medical Section, the psychologic value of the facts was given us by Martin, Simpson, Braisted and Keen, and by Senator Owen and Senator Sutherland. I do not know how I can possibly bring this home to you as I want to. I should despair of it if I did not know that the first wave of response had formed before I left home. when men like McCleave and von Adelung and Howitt and Van Dalsam and Jordan and Alderson and Miller and Watkins have been making plans to offer themselves for commissions and that some of these have made the offer. The example of these men and the reasons which have affected them—and the additional facts and reasons which will present themselves almost daily—will make others see their duty in the same way, and there is no doubt but that they will act in the same way.

Now California is asked to offer for commissions in the Medical Officers' Reserve Corps two hundred men by the first of July. We must get together and see about that. By the time this letter is printed we shall be at it. Every man, to help us, must consider himself a voluntary member of the committees and come, and, if he is of the suitable age and has the qualifications, he should offer himself. That will be the kind of patriotism for an American—a citizen of the United States. Let no one fail in it.

HARRY M. SHERMAN.

State Society

NOTICES.

At the meetings of the Council of the Medical Society of the State of California, held at Del Monte, the following resolutions were adopted:

First—That all members shall be exempt from the payment of dues to the State Society during the time they are in active service and absent from professional work. The Secretary was instructed to ascertain from the A. M. A. what provision had been made for its members.

Second—It was resolved that a war tax of $2.00 per capita, instead of $1.00 (as recommended by the House of Delegates at the second session), be levied on all the members of the Medical Society **not in military service,** in order to meet the deficit occasioned by military enrollment. This tax will

be collected from the State Secretary's office towards the end of the fiscal year.

Third—A resolution was unanimously adopted that the assessment to join the Indemnity Defense Fund be continued at $30.00 up to December, 1918, providing that this action may be hereafter modified by the Council.

Fourth—It was also resolved that the Councilor districts be left at 9, as they stand at present, and that six (6) Councilors be elected at large with the understanding that two (2) be apportioned to Los Angeles County.

Fifth—It was resolved that the annual meeting for 1919 be held at the Hotel Potter, Santa Barbara, California.

Owing to the volume of the report of the 1918 meeting at Del Monte, and the many subjects contained therein, it will not be ready for publication until the July issue of the Journal.

At the One Hundred and First Meeting of the Council of the Medical Society of the State of California, held at Hotel Del Monte, Monday evening, April 15, 1918, at 8:30 o'clock, on motion of Parkinson, seconded by Yates, it was unanimously

Resolved, That a notice appear in the next issue of the Journal calling the attention of members who desire their special lines of practice included in the Roster, to send the desired information to the State Secretary before the 10th of June.

The Roster of the members of the State Society is in preparation now. Therefore, it is imperative that physicians who wish to have their lines of special practice designated should send the information to the State office at once in writing.

AMERICAN WOMEN DOCTORS IN FOREIGN MEDICAL SERVICE.

Forty-three women physicians have been sent into foreign medical service by the American Red Cross, according to the Medical Advisory Committee to the Red Cross War Council. These women have not been sent as a unit, but as individuals. They are not only serving in France but in other conutries in which the Red Cross is giving medical relief. Among those listed are the following from California: Jennie H. Anderson, Eureka; Emma Buckley, San Francisco; Margaret Farwell, Los Angeles; Clelia D. Mosher, Palo Alto; Gladys Patric, Los Angeles; Eva C. Reid, San Francisco; Clare Williams, Berkeley; Helen Woodroffe, Pasadena.

County Societies

ALAMEDA COUNTY.

The regular April meeting of the Alameda County Medical Association was omitted as usual owing to the fact that the California State Medical Society meets at the same time.

The Council of the Alameda County Medical Association has decided to omit the bi-monthly meetings until next October.

On recommendation of the Alameda County Institutions Commission, Dr. J. B. Fish, formerly of the San Francisco County Hospital, was appointed on April 29, 1918, interne surgeon at the Alameda County Hospital, vice Dr. P. Morton Manson resigned.

Dr. Robert T. Legge, of the University of California, has recently been appointed Director of First Aid, Bureau of Military Relief, American Red Cross of the Pacific Division.

Under the direction of the Oakland City Health Department, a drive on the habitat of the mosquito is being planned—all low lands and stagnant pools in creeks among the hills will be sprayed with crude oil.

In response to the call of the American Red Cross and the Government for trained nurses, Mills College has included in its curriculum a course preliminary to the training course for nurses. This course will fit the student to take any responsible position where superior education, administrative ability, supervision of welfare work ,instruction of nurses or care and sanitation by institutions is demanded.

That the crime of parricide committed by thirteen-year-old Alfred Herbert Nelson might have been averted had the boy been subjected to psychological tests earlier in life. resulting in his school course being "scientifically directed and physical or nervous defects corrected," is the conclusion reached by Dr. Jau Don Ball, neurologist and psyehologist, in his preliminary report to Probation Officer C. A. Wood.

Dr. Ball said, in part: "Oakland is in the lead in many respects and it can justly be stated that the medical psychological departments of the public schools in Oakland are doing wonderful work. The psyehological department bids fair to be second to none in the country. I could not permit this opportunity to pass without expressing to you personally, my views not only on this case, but on the subject of child delinqueney in general. When we examine the inmates of the State's prisons, we are dealing with end results. When we examine our juvenile delinquents we are only half way up stream. Let us go to the source, and with all the aid at our command, attempt to recognize the traits characteristic not only of the potential delinquent, but also of the future psyeho--neurotic, and with our best aids, direct the individual course, so that instead of becoming a burden he will become a useful social being."

Dr. Minora E. Kibbe presented her resignation as visiting physician at the County Hospital—the doctor will be a candidate for the State Legislature and time will not permit her to continue her eounty duties.

Dr. Clara Williams of Berkelev is in France, as is Dr. Elsie Reed Mitchell. Dr. Williams is working under the Rockefeller Commission on Tuberculosis for the Red Cross for Civilian Relief among refugees in devastated areas. Dr. Mitchell also is working under the Red Cross among the same people.

On April 19th, the Samuel Merritt Hospital graduated thirty-nine nurses—the largest class in its history. Dr. W. S. Porter presided—Judge W. H. Donahue giving the graduating address, Dr. H. N. Rowell presenting the diplomas and Rev. W. K. Towner delivering the invocation.

The fourteenth commencement exercises of the Oakland College of Medicine and Surgery were held April 20th, Dr. Lemuel Adams, president of the faculty, presented the diplomas. The address was given by Dr. O. D. Hamlin.

Of the thirty-nine cities for which typhoid fever statistics for the year of 1917 have been compiled, the best showing is made by Oakland, with a total of only four deaths, or 1.9 in every 100,000 of population, according to figures received by Commissioner F. F. Jackson of the Public Health and Safety Department. New Orleans has the highest rate, 23.1.

Oakland heads the "honor roll" of cities having rates below five per 100,000. The statistics were compiled in Denver. Other western cities show as follows: Los Angeles, 4.7; San Francisco, 4.9; Portland, 5.2; Salt Lake City, 18.7.

On recommendation of the Civil Service Board of the city of Oakland, the City Council authorized the employment of an additional municipal nurse to be assigned for duty to the Anti-Tuberculosis Society.

LOS ANGELES COUNTY.

Our Honor Roll.

(Continued, as per Dr. Nannie C. Dunsmoor.)

Dr. Elliot Alden, Dr. F. J. Barnett, Dr. Wallace Bodge, Dr. F. A. Bonthius, Dr. Fred Bowen, Dr. O. W. Butler, Dr. W. F. Collins, Dr. Ray Cowan, Dr. Karl L. Dieterle, Dr. Margaret Farwell, Dr. W. V. C. Francis, Dr. Alfred C. Germann, Dr. James S. Hall, Dr. James F. Holleran, Dr. C. E. Ide, Dr. D. P. V. K. Johnson, Dr. J. J. A Van Kaathoven, Dr R. K. Macklen, Dr. S. J. Mattison, Dr. Jacob E. Owen, Dr. Gladys Patrick, Dr. J. Ross Reed, Dr. W. H. Robert, Dr. C. G. Stivers, Dr. J. C. Wilson, Dr. C. S. Young.

April Fourth Meeting of the Los Angeles County Medical Association.

Thursday evening on the fourth floor of the Hamburger Building, at 7:30, a number of doctors' wives started patriotic community singing under the leadership of a competent director, in honor of our military visitors. Madame M. Thorner, wife of Dr. M. Thorner, sang an inspiring solo.

At 8:15, Dr. Wm. Duffield, president, called the meeting to order. The secretary announced the forthcoming address by Major Henry D. Jump, with a mission from Washington calling for needed professional men, medical, dental and nurses.

Dr. Duffield requested Dr. Wm. A. Edwards, chairman of the program committee, to preside. Mr. Gurley Newlin, president of the Los Angeles Chapter of the Red Cross, spoke on the Third Liberty Loan, saying: "You know your duty and have nobly performed it."

As Major John R. McDill was in service, Major Robert Smart spoke on "The Transformation of a Civilian Doctor into a Military Medical Officer."

Major Smart, who was sent up from Camp Kearny, said that during this short time at war 20,000 doctors have been commissioned, 17,000 are serving. Eighty-five per cent had hardly any conception of their duty, most thought it the same as in hospitals. Prior to the war, the man might have been a Jack-of-all-trades, but in the Army Medical Reserve Corps he is assigned to the work to which he is best suited. He should be adaptable to any kind of work.

If all are equally well qualified, there are four things that military doctors must know: 1st, a practical knowledge of camp sanitation; 2d, control of men; 3rd, military discipline; 4th, drill.

Sanitation. This differs from that of civil life, for in the army the individual case is superseded by the mass. Prevention is aimed at. The doctor is the medical advisor of the commanding officer in everything, as the physical welfare of the troops and treating diseases. In camp men are grouped together and contagious diseases spread more quickly. Camps lack modern conveniences. Men get wet and cold and fatigued. Military sanitation can be enforced by quarantine. There is no trouble when men have good water supply, sewage, etc., but in camp latrines, caring for garbage by incinerators, is a difficult task. Put 250 recruits in tents, feed them, you cannot keep away disease. The number of diseases transmitted by water, food, and flies shows how important latrines, etc., are in camp life. The civil practitioner never gives them a thought. Should an infectious disease break out, it must be isolated, separated and quarantined. You must stop it getting into camp. In civil life, you notify the health office. The troop is quarantined until infection has passed. Prophylaxis against smallpox and inoculation against typhoid. Pneumonia and spinal meningitis you treat as in civil life. You never have the same problems in camp. The latrines, fill up with straw, oil is poured on and burned, but they fill up the quicker. Use lampblack and crude oil, flies do not like it; it is the best disinfectant.

The ability to command men. Men in the Medical Reserve Corps, surgeons, internists, laboratory men, may have to be something else. They may have the administration of hospitals, command men at first line dressing hospitals, etc. You must control men in small or large numbers. Refuse, and gain a friend; there should be no semblance of tyranny; treat every one impartially.

Military discipline means to get immediate and unquestioning obedience to an order. It is harder to keep discipline in the American army because the men are brought up on an equality without inferiors and superiors. Rank-salutes and courtesies to superiors are not snobbishness. If men do not observe this discipline, will they carry out orders in the trenches?

Military drill teaches discipline. There are 135,000 hospital corps men. Our soldiers are said to have good brains and action, but discipline and uniform are poor. To drill men is more fun than work. You get up at five in the morning and you will like it. Army regulation is the law by which the army is run. You may be put in care of a base hospital or ambulance. You must know where and how to get the knives and forks, etc.

General Wood said 5,000,000 men in the field are required. Twenty thousand doctors, 17,000 in service. There are 2,000,000 men at present, 3,000,000 more will be needed soon, and from 20 to 30,000 more doctors. Los Angeles will not fail. If you cannot do the thing you are now doing, you must do what you are asked to do.

"Military Aspects of Typhoid Fever," by Major M. A. Ravenal.

Typhoid from the army standpoint is principally its control, which is a brilliant achievement. Military surgeons treat masses rather than individuals. Whatever branch concerned, the object is to get the greatest number of men in the fighting line in the least time. If men have to be quarantined it means much loss. During the Spanish war out of 107,000 men there were 27,000 cases of typhoid, of which 650 died in centers of civilization as in Jacksonville, Fla., and San Antonio, Tex. In that war every camp became infected in seven weeks. Seventy-five per cent. of typhoid epidemic was due to drinking water. Milk has caused big epidemics. The hypochlorite purification of water is simple.

Danger of infection from contact. Typhoid fever carriers infect a larger number of men in the army because of closer contact. Some have been typhoid fever carriers for four years who never had typhoid. Men dying of consumption had typhoid germs in the kidneys. On the ship Aeme, Martin Olsen used the common drinking cup for distilled water thus infecting many. Mary, a cook on Long Island, excreted the germs with the feces infecting many. An epidemic broke out in the Roosevelt Hospital among the help for whom she was cooking. Fifty-six cases were due to her of which four or five died. One hundred and sixty cases were traced to one carrier. At Camp Kearny, because of anti-typhoid vaccination, there is no typhoid carrier or ambulatory case. Frequently protracted diarrhea is often found to be typhoid. In these cases the germs have no power to infect the blood of the carrier. The method of Pasteur of cultivating the virulency of the typhoid germ by passing it from man to man shows how virulent epidemics arise. Flies are carriers. Latrines must be protected from flies by lime. Flies carry the infection from camp to camp. At Camp Kearny there are about 6000 horses. The manure remaining soft, is a fine medium for the typhoid germ's growth. The stage of infectivity is when Peyer's patches break down and there is diarrhea. In the second week of inoculation infectivity is only a little less, but double that of convalescence. Paratyphoid was most prevalent at the Texas border.

Anti-typhoid vaccine should be used for both a and b Paratyphoid. Triple vaccine should be used as there is danger of anaphylaxis if repeated at intervals. Those forty-five years old are exempt from vaccination unless they are to go to the front. Typhoid is now non-existent in the army

due to anti-typhoid vaccination. It is a triumph of preventive medicine.

Dr. Duffield said that the profession has fallen short on the Liberty Loan. There should be organized effort on the part of the city and county in not only buying but also in encouraging the purchase by others. There should be a society executive committee for that purpose, and that Dr. Browning is instructed to appoint its members.

Dr. Thomas reported on the Resolution, In Re Contract Practice in Industrial Compensation Work as follows:

Gentlemen:

A full attendance of your committee and one member of the State Committee on Industrial Accident Insurance, met at my office Wednesday night, March 27th, and after listening to the reading of much of the data used for making our report last year to the State Society (of which committee I had the honor of being chairman), and to letters from Mr. Fellows, manager of the fund, and fully considering and discussing them, the members present admitted that it would not be within the bounds of good business for either the insurance companies, the State compensation fund, or the insured to live up to their agreement made with the State Society at Santa Barbara three years ago, as regards permitting any member of the Society to do industrial compensation work. To do this is equivalent to saying that we believe every member of this Society is thoroughly competent in this work, which is, of course, a wrong assumption. We believe that industrial work is largely surgery and should come under the care of men especially trained and having special facilities for that work.

They have presented to us definite proof of many very glaring incidents of inefficiency; some disloyalty in the matter of padding bills; and undisputable evidence of neglect and other shortcomings on the part of the profession in the diagnosis and care of industrial accident cases.

While we do not believe it is fair, nor believe it to be good business on the part of the State fund to limit the men who are acceptable to the fund to a few, there is no doubt but what a limitation must be put on this sort of work, in order that the law regulating industrial accident insurance, which is on our statute books, can be enforced. The instances of wrong diagnosis, prognosis and treatment given by Mr. Fellows of the commission to this committee, are many and most flagrant. Some of these cases reported are well known to some of the members of this committee.

Our committee is desirous of standing for the medical profession and at all times will resent unfair criticisms, and will endeavor by all possible methods to prevent a stigma from resting upon the profession, but its members must admit that the fund has ample reason for refusing to continue its business on the basis of permitting any M. D., regardless of his lack of special training to assume charge of all industrial accident cases which may come into his hands.

We feel, therefore, that it is incumbent upon us to recognize these facts and endeavor to supply the commission, when requested, with the names of the men who are first willing, and second able, both in knowledge and appliances, to render good services to their injured people.

Your committee's recommendation then is, that a responsible secret committee of five members of the County Society, who do not want the work, be appointed by the president of the Society to act as an advisory board to the commission, to place before the manager of the fund, from time to time, the names of the men in the county who desire the work, and who are doing good surgery and who, they believe, will be fair in their financial dealings with the fund. It should be arranged so that when a man wants to do this work, he can apply to the fund for his appointment, and in return, if the manager does not know him, he can secure all necessary information regarding the applicant, from our secret committee.

We recommend and respectfully request that the manager of the fund cause an application blank to be printed so that those who may desire to do this work may make formal application.

We consider it desirable to both the commission and the medical profession at large, that the present panel of eligibles for the work, be rapidly increased in accordance with the above plan.

Your committee wishes to go on record most emphatically against any and all of the schemes which are being used by most of the insurance companies to secure their medical services for less than the accepted fee schedule, and to urge the Council to proceed, as per instructions from the Society, at once with the disciplining of all members who are guilty of participating in such schemes. The two most common of these transgressions are first the straight salary one, which is simply an effort to get the work done below schedule, and second accepting the work by men at the fee schedule or less and then submitting it to certain other men at a profit to themselves.

Respectfully submitted.

DR. C. P. THOMAS, Chairman;
DR. H. E. SOUTHWORTH,
DR. C. E. PHILLIPS,
DR. E. M. PALLETTE,
DR. F. L. ROGERS,
DR. A. HALDEN JONES,
DR. E. O. PALMER.

Dr. Hunter asked whether twelve men on such a committee would not be a political matter.

Dr. Thomas said that it was a compromise deal with Mr. Fellows that satisfactory men were to be appointed. Any member not satisfactory is dropped from the list. He does not care to increase the list.

Dr. Hunter spoke of a case he had which was referred to others. May not we in general practice be treated equally unfairly?

Dr. Thomas answered that it could not be prevented.

Dr. Cook told of the resolution passed by the committee of the State Society, accepted by that of the County Society, which would come up at the meeting at Del Monte and a fight would take place there regarding it.

Dr. Thomas, as chairman of the State Committee: I will be for this Society if we reject the measure and report it to the State Society.

A motion that the Committee on Contract Practice be continued was carried.

Dr. Thomas C. Myers: As a member of the Society for many years I was in doubt in the way the legal defense fund of the State Medical Society was handled. I became a defendant in a suit of a case where the patient died one and a half hours after the operation. I gave notice and was referred to Mr. Morrow who had no objection to have my personal attorney work on the case with him. Mr. Morrow knew more about embolism, etc., relating to the case than many of the profession and the case was thrown out of court. The State defense fund is right and just. The plaintiff was found unreliable and a perjurer. The State Society spared no expense in looking up the record without extra cost to me. I am heartily in favor of the legal defense fund and our attorney. I joined by donating $30,—$15 per year.

Long Beach Branch.

Dr. H. H. Heylmun, secretary, reports: We had a very profitable meeting the evening of April 26th in which we were joined by the dentists of this city, as well as the doctors and dentists of San Pedro and Fort McArthur.

The scientific program consisted of a symposium on "Focal Infections."

"Viewpoint of the Dentist," Dr. Frank B. Damron.

"Viewpoint of the Rhinologist," Dr. Robert B. Sweet.

"Viewpoint of the Internist," Dr. Bernard Oettinger.

The papers were illustrated by numerous plates and lantern slides and the program was followed by a buffet luncheon."

Pasadena Branch.

Dr. Harry F. Markolf, secretary, reports: No meeting of this branch was held during March.

Dr. F. A. Speik, chairman; meeting held at office of Frank A. Giguette, D. D. S., the Dental Society uniting with the Medical in the program. Routine business first transacted.

First on the program was a paper on "Dental Interpretation of X-rays," presented by H. R. Packard, D. D. S.

Dr. Packard spoke of the necessity of radiographs but also stated the other examinations should not be neglected. He believes radiographs should be interpreted only by those skilled in such work. He mentioned facts of misinterpretations and their effects.

Charles Lee King, M. D., took up the medical aspects of "Dental Infections." Dr. King considers focal infections about the teeth as of the same significance as focal infections .elsewhere. He quoted research work and other work done by others along the line of focal infection. He cautioned against considering the tooth infections as being the only causes of manifestations. Other foci not discovered may be giving rise to the symptoms, and a careful and complete search should be made.

W. C. Smith, D. D. S., took up the "Physical Defects of Children as Observed by the Orthodentists." He described the typical defects as produced by pressure or by lack of pressure. He presented many photographs illustrating the conditions which he described.

There was a lengthy general discussion of the subjects. After adjournment refreshments were served.

Commissioned Officers of Los Angeles County Medical Association.

Captain J. A. Balsley writes from Camp Kearny, April 26, saying:

The commissioned officers of the Los Angeles County Medical Association, now in active service at Camp Kearny are having a splendid opportunity to demonstrate their professional ability and at the same time acquire the necessary military training for efficient service under experienced regular Army officers.

Without exception our County Society members have entered upon their work here with both "pep" and judgment. Some of them have been given positions of considerable responsibility which means that the Los Angeles County Medical Association will likely be well represented on the firing line somewhere over there when this unit arrives.

Very sincerely,

J. A. BALSLEY.

Personals.

Major J. M. Burlew with the United States Medical Corps at San Antonio has been discharged from active service on account of physical defects. April 6th he left for Chicago to be operated upon. On his recovery he will return to Santa Ana.

Dr. Charles G. Shipman, a former Health Commissioner of Santa Monica, died suddenly, April 9, in his office in the First National Bank Building, Ocean Park.

Mother of Dr. Charles Burnside Passes Away.

Mrs. Mary Elizabeth Burnside, 73 years of age, mother of Dr. Burnside, of Los Angeles, died April 10, at her home 1802 North Van Ness avenue, Hollywood.

Long Beach Doctor in British Medical Corps.

Dr. Gordon Grundy, graduate of McGill University, Canada, who practiced medicine in Long Beach, is now a lieutenant in the Royal Army Medical Corps stationed at the 38th General Hospial in Saloniki. He entered the army August 2, 1917, in Canada, where he was doing hospital work.

Dr. Lindley Recovering from Operation.

Dr. Walter Lindley, the founder and general manager of the California Hospital, is recovering from the operation he underwent April 14. Dr. Lindley is 68 years of age and has lived in Southern California for forty-three years.

Dr. J. M. Goodspeed, 77, well-known physician of Los Angeles, died suddenly at his residence, 1121½ South Olive street.

Los Angeles Doctors Wanted for War Duty at Once.

Seventy-five Los Angeles physicians and surgeons under 35 years of age are called for immediate service in Europe by Captain M. M. Cloud of the United States Army Medical Corps. The names of the applicants will be sent immediately to the Surgeon General at Wasihngton. The enlisted are to be sent into the War Zone Hospitals back of the British lines or the convalescent hospitals in England. Apply at room 228 San Fernando building. Applicants must bear pure Anglo-Saxon or good American names. Names that savor of German origin will not be forwarded as they would not be accepted in Great Britain. They must be graduates of reputable medical colleges and must be engaged in the active practice of medicine. California stands thirtieth on the list of States which have sent their medical men into the service.

Physicians under 31 years are subject to service as selects. They would enter the army as privates. It would be better that they enter service in their own profession. Those that enlist will serve in the United States Army Medical Corps, but do British service.

Major J. J. A. Van Kaathoven, April 11, issued a call to the Medical Corps for a volunteer internist for Base Hospital 35 at Camp Kearny.

Army Base Hospital Wants Fifty More Men.

Fifty men not over 45 years are wanted for immediate enlistment in the Army Base Hospital No. 35. Major J. J. A. Van Kaathoven, 1118 Brockman Building, Phones F 2025 and Main 4942, is director of the unit which is now at Camp Kearny. Applicant should apply in person, by mail or phone between 10 a. m. and 5 p. m.

This service will require of one almost all the duties usually required of hospital internes, except the medical side of the work. The men need not be medical men. There is a chance for promotion and immediate service in France.

Two Los Angeles Women Go to France.

Dr. Placida Gardner, city bacteriologist, and her sister, Miss Margaret Gardner, city prosecutor, members of the Stanford University war unit, will leave for France May 15th.

Homeopathic Society Elects Officers.

At a meeting at the Hotel Alexandria, April 10, the annual election was as follows:

Dr. F. H. Bishop, Alhambra, president; Dr. S. S. Salsbury, Los Angeles, vice-president; Dr. B. M. Fuller, Los Angeles, secretary-treasurer. Dr. W. J. Hawkes was toastmaster. Among the speakers were: Dr. Eleanor Martin. Dr. H. G. Shepherd, Dr. F. S. Barnard and Dr. Charles R. Clapp.

It was announced that with the initial endowment of $6000 a new homeopathic hospital in the eastern part of Los Angeles would soon be opened.

White Hospital Opening.

Dedicatory exercises of the White Memorial Hospital were held April 21 at 3 p. m. on the hospital grounds at Boyle and Michigan avenues for the Loma Linda College of Medical Evangelists.

Dr. Percy T. Magan, superintendent of the White Hospital was chairman. Dr. William R. Molony of the State Board of Medical Examiners, the Rev. Arthur G. Daniells, president of the world conference of Seventh Day Adventists, the Rev. W. C. White, son of Mrs. Ellen G. White, for whom the hospital was named; Dr. Newton Evans, president of Loma Linda College of Medical Evangelists; the Rev. E. E. Andrews, vice-president of the world conference for North America, and the Rev. J. W. Christian spoke. The hospital is built upon the court plan, the buildings opening into a central court on the block instead of on the street.

Orthopedic Surgeons Banquet.

Lieutenants Charles S. Young, W. C. S. Koebig, A. M. Schultz, L. M. McCoy, Frank J. Bestin, James J. McLaughlin, and Captain John Cree Wilson of Los Angeles; Lieut. Charles A. Warmer of Ontario; Captain Richard Dillihunt and Lieut. Victor P. Rocha of Portland; Captain Earl Greenwood, Lieutenants Joseph J. Kavanaugh and T. Z. Peoples of San Francisco; Lieutenant C. A. Downs, Baltimore, Md.; Lieutenant John E. Paulson, San Quentin; Captain Everett O. Jones, Seattle; Lieutenant J. W. Crawford, Sacramento, and Lieutenant R. M. Smith of Loma Linda of the Medical Reserve Corps, banqueted their former professors at the University Club April 17.

The honored guests were Drs. A. E. Gallant, Elliot Alden, W. R. Molony, C. L. Allen, Miles C. Varian and Stanley P. Black. The headquarters of the Medical Corps officers are at 810 Brockman Building.

LOS ANGELES COUNTY.

(Continued from May Journal, 1918.)

Dr. Harlan Shoemaker spoke on "Intestinal Obstruction."

He showed the value of histories of these interesting cases. The average mortality is 55 per cent. 45 per cent. walked into the hospital and remained three to eight days on the average, although some were three years coming. Catharsis had been used in all cases, causing reverse peristalsis and vomiting to get rid of same, rupture being the danger.

1. **Pain,** which diminishes with gangrene.
2. **Vomiting** present in every case, belching of gas due to reversal of peristaltic wave.
3. **Distention** may not be present, or may be excessive from drinking too much water.
4. **Tenderness** on palpation requires experienced judgment.
5. **Abdominal Rigidity** during pain.
6. **Tumor mass,** 86 per cent. did not present any. In 18 per cent. tumor could be felt.
7. **Peristalsis** may be present in 13 per cent. Auscultatory peristalsis, absent with gangrene.
8. **Constipation** is always present.

These symptoms and signs constitute the clinical picture of obstruction.

Leukocytosis is present in all cases.

Treatment is medical and surgical. Soap and enemata, washing of stomach for sanitary reasons, by emetics as mustard and water or apomorphine. Nothing should be given by mouth. Water by the Murphy drip method, by hypodermoclysis. Surgical treatment by early operation.

Discussion.

Dr. Chas. P. Thomas commended all Dr. Shoemaker said. He thought the issue in post-operative cases with obstruction are not always fatal; that such cases may be saved as late as the eighth or tenth day, if they had had stomach lavage. They stand re-opening well. He told of a woman re-opened eight times for entroplasty first and then for obstruction, who is now living and well. Distention is present when ice water was given and no stomach pump used. The use of the stethoscope is essential in obstruction, as it points out the obstruction early in the case, thus diagnosing in time for operation.

Dr. Geo. L. Cole spoke of a case of obstruction due to gall stones near the ileocecal valve. There was no history of gall stones, but one of gas and indigestion. The last few years laxatives were used regularly. The gall stones were found in removal of obstruction. A medical case.—Labor had lasted three or four days, and two days after confinement the patient was moribund with intestinal obstruction. Strychnine was given, distention began to lessen and eight days later the patient passed eight inches of intestine. She has been well since.

Dr. E. H. Wiley spoke of a case of obstruction with symptoms of nausea, vomiting, rigidity and unequal and unsymmetrical distention. The withdrawal of the urine relieved the obstruction. A woman was operated on for fibroid and obstruction which was found to be caused by a small tumor in the ileum containing a piece of bone with four or five teeth.

Dr. A. H. Zeiler told of leukocytosis, and nitrogen retention in the blood as of value in early diagnosis of intestinal obstruction. Indican occurs in any form of constipation.

Dr. E. H. Schneider dwelt on intestinal paresis in this connection, and Dr. C. F. Nelson on leukocytosis as one of the early signs; that a case should not go on to peritonitis. Obscure intestinal pain should be carefully studied by the fluoroscope and the X-ray. The cause of intestinal pain should be determined and relieved by early operation, before obstruction develops. Intestinal obstruction other than those cases due to strangulated hernia, etc., are cases of neglect on part of physician. The diagnosis should be made in all cases before intestinal obstruction develops.

Dr. A. B. Cecil spoke of a type of obstruction following right nephrectomy.

Dr. O. O. Witherbee thought much time would be wasted waiting for all the symptoms. It is better to make an incision and find no obstruction than making it too late. In one case the possibility of obstruction was studied by four practitioners and operated upon too late; a loop of intestine was dead. The use of the X-ray and an aseptic scalpel would have been better. When shall we open the abdomen? Shall we open when fully convinced or study the case with the chance of losing the patient who then really has no chance at all?

Dr. Schumaker in closing said that the nitrogen balance was not so interesting as pain, vomiting, distention, tenderness, rigidity, possible tumor mass, peristaltic wave and constipation to make a good diagnosis. The blood count is also of value. Leukocytosis is a rather early sign. Obstruction occurs most frequently past middle life and in early life. Paralysis of intestine is the stage when reverse peristalsis is about to take place. Treatment should consist in an absolute starvation diet and absolute rest. Water should be given under the skin or by colon, not taken in the stomach, which causes distention.

"Splints and Their Application, With Relation to Fractures. Demonstration of a Universal Adjustable Splint," by Dr. J. Rollin French.

Dr. French said that the legal journals discuss this subject because of malpractice suits. The fracture must be reduced, the position immobilized. The splint should give ease and comfort besides being efficient. The cost and time of construction must be taken into account. The splint is made of light wood and must immobilize the limb. The framework must be of rigid material. It should be modified at time of application and

sterilized after a few weeks. It should be removed from time to time varying with the fracture. At the end of the week, massage should be given. Aero-splint for shoulder at right angle, triangular splint, internal angular splint, bridges for compound fractures, plaster bandages on roll, splints for plastic work as for extensor tendons, Hodgens frame, double inclined frame, fracture box, all were spoken of and shown.

Dr. E. A. Newton spoke of fractures being treated in many different ways, of immobilization above and below fractures. A week after Colles fracture, massage should be given every day. The patient should be able to go to work soon, not to get ankylosis. Massage is important.

The Remote Effects of Absorption of Urine from the Colon. A Case of Traumatic Unilateral Uretero-Intestinal Anastomosis.

(By Dr. A. B. Cecil.)

The author points out that heretofore the chief interest in uretero-intestinal anastomosis has centered on developing a technic of implanting the ureter into the bowel in such a manner as to prevent ascending renal infection and hydronephrosis. He has carried out investigation of animal experiments, congenital cases of uretero-intestinal anastomosis and clinical cases of uretero-intestinal anastomosis in man to determine what deleterious effects, if any, might arise from the absorption of urine from the intestine after implantation of the ureter into the bowel. He reports a unique case of unilateral uretero-intestinal anastomosis which had been present for twenty years and resulted from trauma in removing an ovarian cyst. The kidney still continued to functionate into the bowel. The case presented most marked toxic symptoms, blindness, severe headache, high blood pressure, tachycardia, great nervousness, etc. All of these symptoms being very greatly relieved by removal of the kidney which drained into the rectum. His conclusions are that urine can be diverted into the large bowel compatible with quite a long term of life but that independent of kidney destruction prolonged diversion of urine into even the lower bowel exerts a deleterious influence after a considerable number of years which may produce a clinical picture not unlike chronic nephritis.

Discussion by Dr. R. V. Day and Chas. E. Zerfing. Dr. C. P. Thomas spoke of extrophy of the bladder and of high death rate in colon operation because of colon bacilli.

Dr. Cecil mentioned that substances in the colon sometimes go back through the coecum.

Los Angeles County Medical Meeting of March 21st was preceded by community singing led by Mrs. M. Thorner, Mrs. Carl Johnson, Mrs. C. G. Stivers, Miss Ruth Hutchinson, Mrs. William Duffield and others. Wives, best men and girls and friends helped to render the stirring songs in a lively spirit appreciated by all present.

Dr. Wm. Duffield, the president, opened the meeting by declaring that the draft has only commenced and that personal sacrifice is necessary. He announced that the program consists of a symposium on "Selective Service."

Dr. Chas. C. Browning said that every man can be of service, although unable to go to war because of physical disability. Tuberculosis may not disqualify him at home but he cannot go to the front. If one having tuberculosis were discharged from the army because of such disability, he might on his return seeking work be unable to secure any. An incipient case may become a clinical one.

"The Classification in Selective Service," by Geo. J. Denis, chairman Los Angeles County Joint Local Board. He spoke on the theory and practice of selective draft between the ages of 21 and 31.

"Kaiserism," he said, is a blight worse than any disease. Selective Service law is the greatest law the human intellect has produced. It has created a great army in less than one year, all based on the Constitution. To protect the country, the Government was forced to declare war April 6, 1917. The Selective Service law was enacted by Congress May 18. 10,000,000 names were registered. The men were called before the various boards consisting of 15,000 members. The registrants must give reasons why they should not serve. It is no draft, no conscription; it is selective service. The members of the boards are appointed to select the men.

Exemptions:—First, all men except those within the ages of 21 and 31 who have no dependents, called Class I-A.

Second, men who have wives with independent means, Class 1, 2.

Third, those who have dependent father, mother, brothers and sisters.

Fourth, those who have dependent wives.

Fifth, men already in the service. The felon, for no convict can wear the uniform of the country.

The duty of the 15,000 members of the board is to furnish peaceful citizens as warriors. District 17 is the largest board. Exemptions must be in writing. The wife may ask for exemption no matter how much the husband may desire to go, for he owes support to wife and children. Should he leave his wife soon after, she could send him to war for having ceased to be the support of his dependent wife. That man instantly goes into class one. A man who is 5 or 6 pounds overweight or 10 to 12 pounds under weight should be allowed to enter the army. The theory is to get men. Questionnaires must be filled by men of serviceable age. Some pass the local boards with a glance. The local boards should be reasonably certain; more than 600 doctors have been discharged for inefficiency alone. Defects like hernia, troubles of feet and legs can be remedied by surgeons of the U. S. Class C is the industrial army.

"The Medical and Surgical Requirements of the Selective Service," by Granville McGowan, chairman District Medical Advisory Board.

Dr. McGowan said that the army could not be raised successfully without the medical profession. The board was asked to volunteer its services. With the exception of those who have had experience in great corporations, such as insurance companies, the doctors found that the qualifications were quite different, and many diverse opinions arose. Neither the men nor the Government were satisfied. As physicians have their limitations. they know no more in the army than when they were in practice. Slight defects should be repaired. The specialists named in the various systems must be honest and courteous and give a good examination. All classes of labor should be conscripted; the medical service first. Weight, height, girth, eyes, ears, teeth, nose, throat, heart, lungs, genitals, general impression as healthy etc., must be considered. The first class may be from 5 ft. 4 to 6 ft. 2 in height and weight in proportion. The man must be able to carry 62½ pounds on his shoulders for 24 hours. If there is a deficiency in weight find out the cause, examine lungs for tuberculosis. Diabetes, chronic Bright's disease or Basedow's disease may be the reason. The joints must be nimble, etc. The back must be straight. The board will be enlarged to meet demands.

"Some Observations on the Cardio-Renal Work at Cantonments," by Major Walter Brem at Camp Kearny. Dr. Brem pointed out how a man's life may depend on an examination. A case with mitral stenosis, fever 95° to 100°, tonsils enlarged and infected was thought to be tachycardia due to

auto-intoxication from infection. Dr. Brem saw men break down from heart lesions, nearly all had mitral stenosis or hyperthyroidism, or rheumatism. They break down from intensive training when they would not show any affection in civil life. They show no sign while at the disability board in the base hospital, and would say that six different boards never found any heart trouble. There were 156 cases of aortic insufficiency, 100 of hyperthyroidism. The middle west and Utah lead in the latter. Athletic heart, the syndrome of the English, is not admitted, but considered due to hyperthyroidism. The middle west and Utah lead in the latter. Athletic heart, the syndrome of the English is not admitted, but considered due to hyperthyroidism. Tachycardia, the usual symptom of hyperthyroidism, may be caused by mitral is usually practiced before entering service.

MENDOCINO COUNTY.

April Meeting of Medical Society.

A regular meeting was held on Saturday evening, April 20th, at the residence of Dr. L. K. Van Allen, Ukiah.

Our President, Dr. G. W. Stout, called the meeting to order. Members present: Drs. G. W. Stout, Ida Malpas, M. J. Rowe, L. K. Van Allen, F. C. Peirsol, H. O. Cleland, L. C. Gregory and O. H. Beckman. Visitors: Drs. Arabella Feldkamp, Talmage; M. A. Craig, Lakeport; W. L. Blodgett, Calistoga; Donald R. Smith, Talmage, and Captain Raymond C. Babcock, M. R. C., U. S. A.

Minutes of last meeting approved.

Dr. A. S. Hickox, Hopland, and Capt. Raymond C. Babcock, M. R. C., U. S. A., were elected to membership

Among the communications were letters from our Senators and Representative in Congress in answer to our letters urging their active support for the bills for increase in the rank and percentage of physicians in the Medical Reserve Corps of the Army to equal that given to similar officers in the Navy.

A letter for information from the New York Academy of Medicine.

Dr. Van Allen read a circular letter—"To the Local Health Officer"—on Communicable Diseases, from Surgeon-General Rupert Blue.

Program: Dr. H. O. Cleland reported on the after-treatment of his Caesarian Section, which terminated satisfactorily. Next came his paper on Goiter. In it he discussed goiter from every direction and cause—with varying treatment by both medicine and surgery and with varying results. This excellent paper was discussed by all present.

Dr. Van Allen read a very instructive paper on Hydrotherapy in Pneumonia. He emphasized cold towels and mitten rubbing, fomentations and cold compresses.

Capt. Babcock gave a very interesting and illustrating discourse on "Experiences as an Army M. D."

Dr. Peirsol, the Alternate, made a verbal report on the State Society Meeting at Del Monte.

On adjourning Dr. and Mrs. Van Allen conducted us from the neat and fragrantly decorated parlor into a dining-room equally delighting. Our sense of taste was certainly satisfied and left a pleasantly grateful feeling towards Mrs. Van Allen and her cozy and cheerful home.

On Sunday forenoon, April 21st, at Talmage, Dr. R. L. Richards, Superintendent of the Mendocino State Hospital, gave a very practical, illustrating and instructive clinical lecture on Praecox. Several varieties of clinical subjects were interviewed, among them the Czar. Dr. Richards pointed out the peculiarities and progress of each kind, in both the male and female. This society is very much beholden to Dr. Richards for this clinical opportunity.

Our Volunteers.

Lieut. Raymond C. Babcock has been promoted to a Captaincy and is home on furlough.

News from Lieut. H. H. Wolfe states that he had received notice of a recommendation for a Captaincy and was expecting his commission from Washington in a few days. He is on duty in the Camp Infirmary at Camp Crane, Allentown, Pa., and has been busier than ever. Had about sixty cases of mumps, with a few of scarlatina. As he is kept busy improving his mind and his patients, little time is left for letter writing.

Assistant Surgeon R. H. Hunt, U. S. N. R. F., is on the "Moccasin."

NAPA COUNTY.

The officers elected by the Napa County Medical Society for the year 1918 are as follows: President, Dr. J. B. Rogers, State Hospital, Napa; Vice-President, Dr. Robert Crees, Napa; Secretary, Dr. O. T. Schulze, Napa. Dr. Robert Crees was also appointed Associate Editor.

SAN DIEGO COUNTY.

Dr. Gordon T. Courtenay has accepted a commission as Assistant Surgeon in the Navy and is stationed at Ballast Point, Cal.

Dr. O. G. Wicherski, county physician, is again actively about after a few days' acute illness.

Climate and tuberculosis with especial reference to the enlisted man, furnished a timely and animated discussion at the first meeting of the County Society in May. The paper of the evening was presented by Dr. Leon DeVille.

A very interesting dinner meeting was held by the County Society at the U. S. Grant Hotel recently at which the honor guests were the medical officers of the Navy who are stationed about San Diego. Interesting addresses were made by W. H. Bucher, Surg. U. S. N., W. M. Kerr, Surg. U. S. N., E. W. Phillips, Past Asst. Surg. U. S. N., and James F. Churchill, Asst. Surg. U. S. Naval Reserve Force.

The Talent Workers' Hospital, after seven weeks of preparation, is about ready to open its doors to the families of the officers and enlisted men in the service. The managerial board consists of the ranking officer of the Army, here stationed, the ranking officer of the Navy, here stationed, the president of the Talent Workers and the president of the County Medical Society.

SAN FRANCISCO COUNTY.

SUBSCRIBE TO THE BUILDING FUND FOR THE SAN FRANCISCO ASSOCIATION FOR THE BLIND

Send Your Checks to 432 Sutter Street or 1526 California Street.

SAN JOAQUIN COUNTY.

The regular meeting of the San Joaquin County Medical Society was held on Friday evening, April 26th, in the offices of B. F. Walker in the Elks' Building. Those present were: Drs. Margaret Smythe, B. F. Walker, T. J. Cochrane, F. Conzelman, H. B. Bolinger, E. J. Todd, A. H. McClish, Dr. McCloskey, C. R. Harry, Dr. Mason, G. T. Davison, J. V. Craviotto, H. E. Sanderson, J. E. Dameron, Mary Taylor, E. A. Arthur, C. D. Holliger, D. R. Powell, with Major J. Wilson Shiels of the Letterman General Hospital, San Francisco, as guest of the evening. The president introduced Major Shiels, who made a most entertaining and instructive talk upon the experiences with the medical cases seen in the Letterman General Hospital.

SANTA BARBARA COUNTY.

First Lieut. Phillip Cunnane passed through town recently on his way to the Medical Officers' Training Camp at Fort Riley, Kans., where he is a part of Company 31. Much is expected of the brilliantly promising future of Dr. Cunnane by his friends in Santa Barbara.

The new Santa Barbara General Hospital, erected by the county at considerable expense, at Goleta, is now ready for occupancy and will be occupied this month. The hospital is a credit to its builders and the county. Much satisfaction is expressed over its building arrangements and location.

The Cottage Hospital is once more the recipient of great benefit from its benefactors. A nice new addition is being built on the west end which is to be devoted entirely to obstetrics. This will greatly enlarge the department and the physicians of the place greet its advent most joyfully.

SANTA CLARA COUNTY.

The Santa Clara County Medical Society held its regular monthly meeting on May 1st at The Oaks Sanitarium, Los Gatos.

The doctors were first taken on a tour of inspection of the institution's new and model buildings and were particularly interested in the demonstration of the service building and kitchen.

The scientific program began at 8:30 p. m. It consisted of a paper on the Modern Treatment of Tuberculosis and Sanitarium Methods, by Dr. W. C. Voorsanger, medical director of the sanitarium; cases treated at the Oaks Sanitarium during the past two years by Dr. Louis Boonshaft, assistant medical director of the sanitarium: and The Value of the X-Ray in Tuberculosis of the Lungs, by O. Ginsburg, roentgenologist. Many unusual and interesting X-ray plates of lung cavities, artificial pneumo-thorax, spontaneous pneumo-thorax and circumscribed lesions were shown.

At the end of the scientific program, the guests sat down to a supper as a practical demonstration of the sanitarium's cuisine.

The large attendance voted the meeting one of the most successful ever held by the society.

Military News

STANDARD MEDICAL NOMENCLATURE.

In view of confusion arising because of different terms used in various medical groups to designate the same things it was deemed advisable that a conference be held to discuss the adoption of uniform nomenclature. Accordingly, an informal preliminary conference has been held at the offices of the medical section of the Council of National Defense and it is believed that a promising start toward reaching the desired end has been taken.

In a small percentage of instances the same diseases are designated by different words. Similarly, injuries of identical nature, identical operations, procedures such as surgical dressings, diagnostic tests and methods of treatment are, in different branches and in different localities, given different names. The same symbol should be used to designate the same condiiton. There is also lack of uniformity in abbreviations used in various medical records, such as hospital histories, written orders, and laboratory reports.

It is obvious to all medical men that, as a means of quick understanding and saving of time in these days when time is so precious, the same nomenclature and abbreviations for all identical things should be used. The men who attended the conference were agreed as to the desirability of such entire uniformity.

A net result of the meeting, inasmuch as the Army, Navy, and Public Health Service are practically in accord, was the passing of a motion that the Council of National Defense, medical section, should request the Surgeon General of the Army, the Surgeon General of the Navy, and the Surgeon General of the Public Health Service each to name a representative to confer on the matter of agreement concerning names of diseases and injuries. It was also voted that after such a list has been prepared there should be called together representatives of the leading national bodies who should have a voice in such decisions. Once a general agreement is reached the 20,000 doctors who go back to civil life after the war will automatically bring these lists into general use throughout the hospitals of the country.

INFORMATION BUREAU ON NATION'S HOSPITALS.

Information regarding the hospitals of the United States, in process of compilation since 1916, is now collated and indexed in the medical section of the Council of National Defense. A central bureau of information concerning the hospital facilities of the country, under war conditions, is thus provided. The data will be kept up to date from month to month. This bureau has not only the details of over 1000 active hospitas but is also gathering full data concerning nearly 8,000 other institutions which include sanatoria, infirmaries, homes, asylums, and dispensaries.

What each hospital has contributed in the way of medical men and internes for war service has been entered on the cards. The number of nurses who have volunteered and those remaining, the possibilities of expansion for war-service, the results of personal inspection by state boards will constitute valuable active working data.

United States Army medical training schools have been created with a capacity of 21,000 officers and men, 15,000 enlisted men, and 6,000 officers have been already trained and graduated.

Pomona Valley Hospital

By JOSEPH K. SWINDT, M. D., Pomona, California.

The Pomona Valley Hospital, located at Pomona, Los Angeles County, is owned by the Pomona Hospital Company, a corporation consisting of about two hundred stockholders. The hospital building is a Class A structure of reinforced concrete, absolutely fireproof construction throughout and bonded against earthquake shock. The building, grounds and equipment represent an investment of seventy-five thousand dollars.

At present there are forty beds equipped for patients. Four rooms are connected with private bath, and four semi-private rooms accommodate two or three patients each. At one end of the basement floor a group of rooms has been arranged for the forcible detention of insane, violent or criminal cases, and includes accommodations for attendants in charge. Spacious diet kitchens on the second and third floors are connected with the main kitchen by large dumb waiters. A home laundry is conducted in the basement.

The operating pavilion includes operating room, obstetric delivery room, sterilizing and scrub rooms. A special eye, ear, nose, and throat operating room has been recently provided for by the family of the late Dr. F. W. Thomas, formerly president of the company.

Patients enter the hospital by an ambulance drive which passes through the basement floor of the building. From this drive they are transported on an automatic elevator to all floors and the roof garden. All rooms are so built that beds containing patients may easily be pushed out to commodious screened porches at each end of all floors, or taken on the elevator to the sun parlor on the

roof, or out in the open air of the roof garden, which covers the entire building. All rooms are heated and ventilated by the plenum forced air system; on hot, dry days, moist, water-cooled air is forced throughout the building by the same system. The silent light annunciator call system connects all rooms and porches with the nurses' chartrooms, with control pilots in the office and

Pomona Valley Hospital.

superintendent's room. Speaking tubes connect all floors with the business office.

The building is surrounded by some two acres of ground, which has been beautified into a fine park, many of the trees bearing fruits for the patients' use.

There are over one thousand rose bushes, besides

Pomona Valley Hospital—Nurses' Home.

flowers and shrubs of all varieties in the gardens. An inclined plane permits patients to reach the grounds easily in wheeled chairs.

The Training School for Nurses enrolls from fifteen to twenty nurses. The new home for these nurses, erected through the generosity of Miss Martha N. Hathaway of Claremont, was opened for occupancy April 25th. The cost was five thousand dollars, and it provides commodious quarters for twenty nurses. It contains, in addition to a large living room, a recreation room, in which has been placed a good sized library, donated by the Pomona Medical Society. The meetings of the Medical Society are held in this room each month, and the nurses are regular attendants at all scientific programs.

The hospital was erected in the Spring of 1914 and opened for service August 26, 1914. During the year 1917 there were admitted 810 patients. There were 550 operations performed and 85 babies were born there during the year.

The Hospital maintains no regular staff, but is open to the patients of any licensed practitioner of California. The officers of the corporation are: Dr. E. E. Kelly, President; Chas. P. Curran, Vice-President; Dr. J. K. Swindt, Secretary; F. E. Graham, Treasurer; N. G. Moulder, Business Manager; and Miss Edith Patten, R. N., Superintendent.

There is no endowment of this Hospital and no desire on the part of the stockholders to reap dividends on the business. Rates are adjusted to meet expenses necessary to provide the best of service and the greatest amount of comfort for the patients. The average cost per day per patient for 1917 was four dollars. The charitable work of the institution is carried on under the direction of the Women's Auxiliary, whose funds, raised by their own efforts, are utilized to pay the expenses of needy cases at semi-private rates, so that no discrimination is ever made in the care and treatment of any patrons of the hospital, a unique and most gratifying solution of a vexatious problem. Auxiliary cases are treated without fee by any physician they may elect through an agreement made with the local Medical Society.

Department of Pharmacy and Chemistry

Edited by FELIX LENGFELD, Ph. D.

In its propaganda for reform, the Council of Pharmacy and Chemistry of the A. M. A. considers some old favorites.

BROMIDIA is classed as distinctly dangerous on account of its chloral contents and because the impression has been given that the chloral has, in some way, lost its bad qualities.

TONGALINE is a hodge-podge of drugs thrown together without therapeutic rhyme or reason, and NEUROSINE is almost as bad.

The makers of PEACOCK'S BROMIDES claim superiority for their preparation because the bromides are free from chlorides. Even if this be true, there is no great advantage as the commercial bromides contain not much over 1% of chlorides, so that even if 100 grains were given in a day the patient would get about as much chloride as in a tablespoonful of milk.

TYREE'S POWDER once claimed to be a mixture of alum, boric acid, phenol and aromatics. Later analysis showed it to be a mixture of zinc sulphate, boric acid and aromatics and this is the formula now given on its label. PULVIS ASEPTINOL COMP. makes about the same claims as TYREE'S POWDER with an addition of a small amount of Hydrastis. Preparations of this kind really fill no place in medicine. Any physician can write a better prescription and save his patient money. In addition the makers of many of these preparations ask the physician to see that they are dispensed in original containers. This gives the patient a chance to see just what he is getting and to prescribe for his friends.

ASPIRIN is a good example of the way in which physicians popularized a proprietary article. Aspirin was first exploited at a time when a vigorous popular campaign was being waged against Acetanilide, Phenacetine, etc. The physician was kept supplied with reports from foreign clinics showing that Aspirin had many good qualities and no bad ones. Aspirin was freely prescribed and, in addition, many physicians told their patients to take Aspirin tablets or capsules. Of course, every patient thus advised began to prescribe Aspirin for his friends and soon Aspirin became the popular family remedy used by everyone from baby to grandma, for everything from baldness to ingrowing toe nails. It is but justice to the patentees to state that they were not to blame for this. They confined their propaganda to the physician and the medical journal. The fault lay with the medical profession. It was soon found,

however, that notwithstanding foreign clinical reports, acetyl salicylic acid is not entirely unlike acetanilide, but like it, has a kick, so while very useful in proper cases, its indiscriminate use is dangerous. Many physicians, therefore, tried to discourage its general use but their efforts were misunderstood and too late. Nothing short of drastic legislation will curb the evil. It is only within the last two or three years that there has been any direct advertising of Aspirin to the general public. The patent expired last year and the patentees have tried to make the monopoly perpetual by seeking to convince the public that Bayer Aspirin is better than other Acetyl Salicylic Acid. Tests recently made in the laboratories of the American Medical Association show that practically all standard makes of Acetyl Salicylic Acid are equal, if not superior, to the Bayer Aspirin and that there is no reason why this should be used in preference to any other.

ARSPHENAMINE is an excellent example of the prejudice that exists against American made articles. There is no reason why this cannot be made in this country and there is no reason to suppose that the American made Salvarsan, Arseno-Benzole, etc., is in any way inferior to the German Salvarsan. However, reports continue to come in of the toxic effects of the American made article. This is perhaps due to the fact that toxicity when the German Salvarsan is used, was ascribed to idiosyncrasy or faulty technique and when an American article is used it is ascribed to toxicity of the article itself. There is no doubt that toxicity was observed frequently when the German Salvarsan was used and there is no reason to suppose that it is more frequent with the American article than it was with the German. Certainly any physician is thoroughly justified in using any one of the Salvarsans that has been approved by the Council of Pharmacy and Chemistry.

The Council rejected for admission to the list of new and unofficial remedies MEDIOL SUPPOSITORIES and GUAIODINE, neither of which seems to have reached California as yet.

MEDIOL SUPPOSITORIES were rejected because they seem to be an imitation of Anusol Suppositories and as Anusol Suppositories have not been admitted to the list there seemed no reason for admitting an imitation.

GUAIODINE claims to contain colloidal iodine. It is found to be merely an iodated oil and there seems no reason to attribute to it the antiseptic properties claimed.

All licenses issued under the Harrison Anti-Narcotic Act expire June 30th and should be renewed before July 1st. Blanks will be sent to all licensees and these must be filled out and sworn to either before a Notary or at the Custom House. The fee and blank should then be sent to the Collector of Internal Revenue. Last year one month's grace was allowed so as to impose no hardship upon physicians, etc., away on vacations. There is no assurance that this will be done this year as it is entirely optional with the Commissioner. Medical officers of the Army or Navy require a license if they use or prescribe narcotics in private practice.

State Board of Health

MAY MEETING.

The State Board of Health met in Sacramento on May 4, 1918, the following members being present: Dr. George E. Ebright, president; Dr. F. F. Gundrum, vice-president; Dr. Edward F. Glaser, Dr. Adelaide Brown, and Dr. W. H. Kellogg, secretary.

Acting upon the statement of the Health Officer at San Francisco, Dr. W. H. Hassler, that $5000 has been appropriated for the maintenance of an additional ward in the San Francisco Hospital, such ward to be devoted to the care of the tuberculous, and because of the resolution of the San Francisco Board of Supervisors providing for the appointment of a committee to select a site for an out-of-town sanatorium, to be erected at a cost of $50,000, the tuberculosis subsidy, which was withdrawn from the San Francisco Tuberculosis Hospital March 2nd, was temporarily restored until July 1st. At that time the Board will again consider the continuance of this subsidy, such action to be based upon further activities of the San Francisco authorities toward the provision of a sufficient number of beds devoted to the care of the tuberculous and the establishment of an out-of-town sanatorium.

The secretary was delegated as a representative of the State Board of Health to attend the Sixteenth Annual Conference of State and Territorial Health Officials to be held in Washington, D. C., on June 3rd and 4th.

Upon the recommendation of the Director of the Bureau of Sanitary Engineering, permit was granted to the town of Livermore to continue to dispose of its sewage upon certain lands in the vicinity of the town. A temporary permit was also granted to the city of Lodi to continue to use the existing sewer system and septic tank, discharging effluent into the irrigation ditch of the Woodbridge Canal Company under certain definite conditions. A permit was granted to San Diego County to continue to discharge sewage from the County Tuberculosis Hospital by treatment in Imhoff tank with final disposal by irrigation on a portion of the county farm adjoining.

Upon the recommendation of the Director of the Bureau of Sanitary Engineering, permit was granted to the city of Tracy to continue to furnish water for domestic purposes from its present supply under specific conditions. Upon the recommendation of the Director of the Bureau of Sanitary Engineering, temporary permits were granted to continue the use of sewer wells for a period of six months in Manteca. These permits were granted upon certain definite conditions as specified by the Director of the Bureau of Sanitary Engineering. Temporary permits to operate swimming pools were granted to George A. Cheney, Coronado Tent City; Edward Weit, Wasco, Cal.; J. D. Kenney, Los Angeles; Leota I. Zapp, Fresno; C. W. Gibson, Middletown; J. H. McDougall Company, Salinas, and the city of Tulare.

A permit to operate a cold storage warehouse was granted to the Peoples Ice Corporation of Fresno, upon the recommendation of the Director of the Bureau of Foods and Drugs.

Certificates as registered nurses were granted to three candidates upon the recommendation of the Director of the Bureau of Registration of Nurses. These certificates were granted under the reciprocity provisions of the act.

The report of the Food and Drug Inspection Committee was approved, following which a number of alleged violations of the Food and Drug Act were brought before the Board for hearing.

W. H. KELLOGG, M. D., Secretary.

BUREAU OF VENEREAL DISEASES.

The following letter is being sent to the Commanding Surgeons of Army and Navy stations in the State:

The Bureau of Venereal Diseases of the State Board of Health was organized for the express purpose of combating venereal diseases in both the soldiers and sailors and the civil population. Its work is done in direct co-operation with the War and Navy departments and the Surgeon General's office. For this reason it desires to call your attention to what it is doing and what it is offering.

It issues a pamphlet on "Gonorrhoea and Syphilis" for patients.

It issues a pamphlet on "Syphilis" for physicians.

It issues a pamphlet "Instructions for Mothers on Teaching Girls the Laws of Sex."

It furnishes special placards to be posted in latrines.

It issues a pamphlet on "Rules and Regulations for Venereal Disease Control."

Copies are enclosed and will be furnished in any quantity desired for any camp.

In co-operation with the Commission on Training Camp Activities it offers and pays expenses of illustrated lectures on Social Hygiene and Venereal Diseases. Through the same agency it offers an exhibit for every camp.

It offers the use of a stereomotograph showing automatically slides on sex hygiene and venereal disease. This machine is now at Camp Kearny and may later be used at other large camps.

It offers the services of the State Board of Health Laboratory for examination of blood for syphilis and slides for gonococcus. Containers will be mailed on request.

It offers to place any physician's name on the mailing list for the Monthly Bulletin containing reports of the Bureau of Venereal Diseases and items of general interest in public health work.

It offers special investigation of any reported source of infection of gonorrhoea or syphilis.

In general, the bureau will undertake to assist in the solution of any problem connected with the campaign against venereal disease, in which any official of the Army or Navy desires assistance or co-operation.

National Children's Year Program

Adapted to California's Needs.

A program of nation-wide application for Children's Year has been issued by the Children's Bureau, Department of Labor, Washington. The application of this program to California has been made by the Children's Year Committee of the Woman's Committee of the State Council of Defense. Many points in the National Program are covered in California by legislative measures and by active agencies in the field, and a co-operative spirit is established with these agencies, i. e., Child Labor and Juvenile Protective, Juvenile Court, Mental Hygiene, Recreation and the Mother's Pension Work.

The California State Program will be as follows:

(1) A year's campaign on better birth registration.

(2) The more intelligent use of our clean milk law.

(3) The establishment of Children's Health Centres—

(a) In Medical Clinics, centers at schools or churches, in as many communities as possible. Three times during the year in June, November and March, these centers will be used for a drive on measuring all California Children under six. A physical standard is to be developed by the Children's Bureau, and the "Weighing and Measuring Drive" is National and not State work. Throughout the year these Children's Health Centers will be open for conferences.

(b) Individual doctors are to be enrolled to give Free Health Conferences in their own offices as a weekly service to children throughout the year. This plan will reach parts of the State where no organized clinics exist.

(4) The ideal for each county to work for will be a permanent Community Public Health Nurse and a Children's Health Center, as the result of Children's Year work.

(5) The necessity of better pre-natal guidance will be brought to the mothers of the State by the distribution from the Children's Year Headquarters, 323 Haight Street, San Francisco, to all women enrolling, a series of nine pre-natal letters which have been used in Kansas and Massachusetts.

(6) Throughout the year we hope to gather data which will help in an understanding of the relation between the family budget and good health in our State.

The lesson of the result of physical examination for the draft, and the elimination of thirty-five per cent. of our men from twenty-one to thirty-one years of age, must come home to every mother. Many of these physical defects began in young childhood, and by better care could have been prevented.

The National Program for Children's Year has the slogan: "Save 100,000 Babies." The preschool age is emphasized as the age to be helped. For California this means a saving of 1,822 lives and the extension of the ideals of the value and welfare of child life throughout the State.

Each county, under its Chairman of the Woman's Committee of the Council of Defense, has appointed a Children's Year Committee (absorbing into this Committee—Public Health and Child Welfare Committees previously appointed), and the county program will cover 1, 2, 3 and 4 of this program.

Numbers 5 and 6 will be arranged for by the central office in co-operation with the county committees and State agencies.

Remember that no program can be made valuable unless each integral part works hard, enthusiastically and steadily.

The co-operation of every mother in California is needed to save and keep well our babies.

Doctors, nurses and committees can help, but the mother is the chief worker.

ADELAIDE BROWN, M. D.,
Chairman.
MRS. ALFRED McLAUGHLIN.
LOUISE B. DEAL, M. D.
MRS. EDW. F. GLASER,
Treasurer.

The White House
Washington, D. C.
March 29, 1918.

Honorable William B. Wilson,
Secretary U. S. Department of Labor,
Washington, D. C.

My Dear Mr. Secretary:

Next to the duty of doing everything possible for the soldiers at the front, there could be, it seems to me, no more patriotic duty than that of protecting the children, who constitute one-third of our population.

The success of the efforts made in England in behalf of the children is evidenced by the fact that the infant death rate in England for the second year of the war was the lowest in her history. Attention is now being given to education and labor conditions for children by the legislatures of both France and England, showing that the conviction among the Allies is that the protection of childhood is essential to winning the war.

I am very glad that the same processes are being set afoot in this country, and I heartily approve the plan of the Children's Bureau and the

Woman's Committee of the Council of National Defense for making the second year of the war one of united activity on behalf of children, and in that sense a children's year.

I trust that the year will not only see the goal reached of saving one hundred thousand lives of infants and young children, but the work may so successfully develop as to set up certain irreducible minimum standards for the health, education and work of the American child.

Cordially and sincerely yours,

(Signed) WOODROW WILSON.

New Members

Hickok, Arthur S., Hopland.
Finkelberg, I. E., San Bernardino.
Bolton, Elmer S., San Bernardino.
Kruse, Fred H., San Francisco.
Robinson, Samuel P., Santa Barbara.

Obituary

MARTIN KROTOSZYNER,

San Francisco.

Deep sorrow settled over this community, and especially over the medical profession when on the twentieth day of April, 1918, the news of the terrible tragedy, the brutal murder of Dr. Martin Krotoszyner, spread like wildfire throughout the city.

His long career here had endeared him to his colleagues and gained him an unusually wide circle of friends and patients who, with his family, mourn deeply his sudden and untimely loss.

Dr. Martin Krotoszyner was born in Ostrowo, Germany, on September 6th, 1861. After having finished the preparatory schools of his native town he commenced his studies at the University of Berlin. Medicine then was not his choice. He always declared philology to have been his first love, and to this science his first three semesters were devoted. The death of his father changed the financial aspect of his family and with it the pursuit of his studies. He took up medicine and after the prescribed course graduated in the Universities of Berlin and Leipzig. After his graduation he spent a considerable time as a young physician in hospitals, and acted as substitute in the practice of older established physicians.

The spirit of adventure moved him in March 1908 to turn his eyes toward America, and he accepted a position as surgeon on a steamer of the Hamburg-American Line plying between Hamburg and New York. A medical friend in New York spoke to him of the wonderful charms of the Wild West and the free and romantic life prevailing there, and induced him to accept the offered place of a physician in a small Arizona town. In this wild and remote village he commenced his life's work in America with the consciousness and energy that distinguished everything he undertook. But his stay there was not for very long. Romance alone, especially of the Arizona brand, does not possess a very nourishing quality. After six months of hard work and receiving his remuneration mostly in the form of merchandise and animals of dubious value, he decided to try other fields. Here again chance guided his choice. As youth will, even in a man afterward so deliberate and thoughtful, he relied upon the flip of a coin to determine whether he should go to El Paso, Texas, or settle in California. California it was.

Coming from Arizona the southern part of the state did not appeal to him especially, and San Francisco became his choice. While the earliest years of his practice here were full of hard struggles, he soon gained friends among the profession and in the public. His earnest endeavor and conscientious work soon became appreciated and success followed and remained with him ever since.

After years passed in general practice he devoted himself more and more to the specialty of the genito-urinary organs and attained a nation-wide reputation in its practice. His ambition for the improvement in knowledge and experience caused him to make seven trips to the East and Europe to the centers of learning.

Dr. Krotoszyner was at the instant of his untimely end Urologist of the German Hospital, which position he had held for fourteen years. He was also the Chief of the Urological Clinic of the San Francisco Polyclinic, a member of the staff of the San Francisco Hospital, Vice-Chairman of the Genito-Urinary Section of the American Medical Association and American Director of the Jahrbuch für Urologie founded by Prof. Nitze. At former periods of his life he occupied the position of Chairman of the San Francisco branch of the American Urologic Association, Chairman of the Genito-Urinary Section of the San Francisco County Medical Society, member of the Board of Directors of the San Francisco County Medical Society and Instructor of Cystoscopy, Medical College, University of California.

Dr. Martin Krotoszyner married in June 1896, and had the good fortune to possess in his wife a true mate and companion, who by her presence and tender care cheered his life and aided him in his work and efforts. She and their five children are stunned by the deep hurt of the terribly cruel blow, and we in the name of that noble profession of which he was an ornament, extend to them our sincere and heartfelt sympathy.

J. R.

Deaths

Dr. Charles G. Shipman, of Ocean Park, Cal., Rush Med. Coll., Ill., '81, died suddenly in his office, April 9, 1918. He was a member of the Los Angeles County Medical Society.

Dr. J. E. Frazier, of Tuolumne, Cal., Louisville Med. Coll., Ky., '85, died April 7, 1918.

Dr. Charles H. Wheeler, of Fall River Mills, Cal., Eclectic Med. Inst., Ohio, '89, died April 11, 1918.

Dr. Wm. A. Long, a graduate of Cooper Medical College, San Francisco, died in Lewiston, Montana, April, 1918.

Dr. Wm. Lomax Graves, a graduate of Med. Coll. of Georgia, 1859, died in Los Angeles, Cal., April 7, 1918.

Dr. James T. Miller, of Sacramento, died March 29, 1918, age 67, of heart disease.

Dr. Bruno A. Genss, of 596 Haight St., San Francisco, died April 10, 1918, of myocarditis.

Dr. Wm. B. McGill, of Redlands, died at Lancaster, March 19, 1918, of blood-poisoning. He was a graduate of the Univ. Penn. Med. Dept., Pa.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

Advertising Committee:
R. E. BERING, M. D. THOS. E. SHUMATE, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn.....Dr. W. H. Walker, Willows
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin.....Dr. W. F. Jones, San Rafael
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa.....Dr. Robt. Crees, Napa
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. P. H. Reilly, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI JULY, 1918 Number 7

THIS MEANS BUSINESS—READ IT!

There was described in a recent issue of the JOURNAL the formation of the Volunteer Medical Service Corps. This Corps is designed to furnish an emergency medical organization, auxiliary to the medical establishments of the Army and Navy, for such military and civic duty as is not otherwise provided for. Members are to be those physicians who would be accepted for the Medical Reserve Corps, were it not for physical disability, over military age (55), essential public need, essential institutional need, or dependents. Women physicians are eligible. Members must be licensed graduates in medicine, and must apply for membership on regular blanks which will be furnished by county secretaries or from the JOURNAL office. Appropriate insignia will be adopted and members will wear it. In the application is included a detailed statement of training, experience, scientific and other aptitude, and special availability for special service. In this last are included service as consultant, institutional work, local or medical advisory boards, rehabilitation of rejected registrants, services to needy families of enlisted men, sanitation, and any other special service likely to be needed.

We have urged every doctor to make the need for Army and Navy medical officers a first claim on his attention. That the state of California is well represented by the enrollment thus far is shown by the following table:

County	Registers about	Number in service	Percentage
Alameda	528	51	9.6
Amador	12	1	8.3
Butte	38	2	5.2
Contra Costa	47	9	19.0
Eldorado	8	1	12.5
Fresno	133	9	6.7
Glenn	13	2	15.3
Humboldt	42.	4	9.5
Imperial	38	3	7.8
Inyo-Kern	73	11	15.0
King-Lake-Lassen	26	4	15.3
Los Angeles	1549	220	14.2
Madera	32	0	0.0
Marin	33	8	24.2
Mendocino	31	2	6.4
Merced	29	3	10.3
Modoc	6	3	50.0
Monterey	32	2	9.3
Napa	56	2	3.5
Nevada	11	1	9.0
Orange	86	6	6.9
Placer	31	4	12.9
Plumas	11	1	9.0
Riverside	79	10	12.6
Sacramento	165	14	8.5
San Benito	11	0	0.0
San Bernardino	144	18	12.5
San Diego	74	38	51.3
San Francisco	1241	214	17.2
San Joaquin	100	7	7.0
San Luis Obispo	33	4	12.1
San Mateo	36	5	13.8
Santa Barbara	60	8	13.3
Santa Clara	170	19	11.1
Santa Cruz	45	5	11.1
Shasta	21	1	4.7
Siskiyou	30	1	3.3
Solano	35	5	14.2
Sonoma	70	6	8.5
Stanislaus	50	4	8.0
Sutter	9	0	0.0
Tehama	18	2	11.1
Trinity	5	3	60.0
Tulare	51	6	11.7
Tuolumne	12	1	8.3
Ventura	31	7	22.5
Yolo	22	1	4.5
Yuba	12	3	25.0
Calaveras, Colusa, Del Norte, Mariposa, Mono, Sierra, Yosemite	26	1	

Not the absolute figures but the percentages

are of special interest here. How is your county represented? If it is not equal to the percentage allotment for the entire state, which means an average of 20 per cent. for each county, are *you* to blame? Why should not your county have its just and equable proportion of medical officers? Why should not every county go beyond its quota? If your county percentage is below the allotment, why are *you* not enrolled in the Medical Reserve Corps?

But suppose you are not in uniform and are not commissioned in either the Army or the Navy Reserves, and you *have* a legitimate reason. And you are able and willing to do what you can in your own location even though circumstances make it impossible for you to accept the call to active duty. *Then apply at once for enrollment in the Volunteer Medical Service Corps.* If you are really entitled to exemption from the Medical Reserve, you will be enrolled here. It is for such as you, and is to give you a chance to render needed and patriotic service of real value and with proper recognition and insignia. It is your duty and honor to enroll. Do it now.

Think this over carefully. Send for detailed literature of the Volunteer Medical Service Corps. The physicians of the state have responded admirably thus far to the call for active duty. Here is the opportunity and call for those who for any just reason cannot go to full active duty. Do not pass it by. Enroll now. Shortly you will sadly need the uniform or the insignia of this Corps. Get it now.

IMPORTANCE OF RED CROSS HEALTH CERTIFICATES.

All persons employed by the Red Cross in any official capacity abroad must have a careful physical examination and certificate from a licensed physician. Usually the examining physician will be the usual medical attendant of the applicant. Nearly always there is a tendency for the examiner to feel that he should be lenient and give the best possible interpretation to his findings. Against any such feeling all physicians are hereby seriously warned. These Red Cross health certificates are confidential reports from the physician to the Red Cross. They receive much attention and carry much influence in determining whether the applicant shall be accepted.

It is the part of honesty and real patriotism for the examiner to keep constantly in mind the importance of his function and the patriotic necessity for a true and accurate report. The Red Cross relies on these certificates and therein on the integrity and care of the examiner. An ill-considered or too optimistic report will often mean the physical breakdown under service conditions of a person who should never have been sent abroad. Such breakdown means large expense in cash to the Government, and means the withdrawal of bed space in hospital, and of medical and nursing service which are urgently needed for others. It means also the wastage of money, time and effort on the part of the Red Cross in trying to obtain qualified workers.

In all examinations for the Red Cross the physician should exercise the most scrupulous regard for ascertaining and presenting the real facts of the case. More even than in an insurance examination is this necessary because of the patriotic features involved and the serious consequences which may ensue if an applicant is wrongly certified as mentally and physically qualified for service. Regular medical examiners will be or have been appointed in cities and towns where needed by the Red Cross. If these examiners are found unsatifactory and their reports inaccurate, others will be appointed in their places.

THE TREATMENT OF DRUG ADDICTION.

The operations of the Harrison narcotic law have brought to light many cases of unsuspected drug addiction. This is in addition to the cases of rather common occurrence in the Oriental population and other recognized groups. Yet the fact remains, in spite of the current impression that drug addiction is excessively common, that there are probably few accurate data available and that the actual number is really unknown. It has been estimated that there are not over 175,000 addicts in the United States. This may be far too small but even thus, the condition constitutes a serious problem and demands more study than the average physician has given it. Drastic regulation has doubtless failed to reduce the number significantly and we are forced to the conclusion that it is necessary for the physician to be better informed in proper treatment and in the seriousness of the condition.

This situation has led many of the better medical schools to establish lectureships on drug addiction, in order that medical students may have definite and thorough instruction in this important subject. There is serious need, however, in addition to this, that certain problems be carefully studied and data accumulated on them. More information is needed as to the incidence of the condition, as to the causes for it, and as to the mental and psychological attributes of the condition. These phases might well be taken up in the program of the Society for Mental Hygiene. Proper education of the young is certainly necessary if they are successfully to avoid contracting these practices.

It is essential that drug addiction should always be treated in proper institutions or hospitals, and that the course be prolonged. The special type of treatment has been described and discussed in medical literature quite fully. There are, however, certain considerations which seem to have lacked due emphasis.

Many physicians are under the impression that when a drug addict has been taken off the drug, the cure is completed. Such, of course, is far from the fact. The real cure is only beginning at this point. It is absolutely essential to establish a psychological state in the patient as well as a physical absence of the drug. Otherwise the addict will remain an addict and return to his drug at the first opportunity or temptation. Many opium addicts

derive a certain sensuous pleasure from lying on a hard board or floor. This has become associated in their mind with the pleasure of the drug itself. To remove the drug and to have the patient still enjoying the "bunk habit" and deriving pleasure from lying on a hard surface, is far from effecting a cure. There must be produced a new psychological condition which really means that the patient is making a new and conscious start, and a will to conquer the habit.

Another common error is to shorten the institutional stay when the habit seems controlled. A longer stay under the moral restraint and associations of the institution and its staff often is of permanent value in determining the length of the cure. Mental control, self-confidence and psychological equilibrium must be thoroughly restored. To this end, confidence and trust in the physician are very important, and the degree to which they are obtained by the physician will often measure the success of the cure.

There should be definite state provision for the skilled care and treatment of drug addicts in state hospitals under competent supervision. Along with this should go the abolition of manufacture of all opium preparations except the most essential. The great bulk of drug addiction is represented in the undue use of opium or its derivatives. Physicians should recognize that the treatment of drug addiction is no easy matter and that institution care and expert attendance are essential.

LEGAL ASPECTS OF SOCIAL INSURANCE.

An interesting meeting of the San Francisco County Medical Society was held June 11th. The President, Dr. J. H. Graves, presided and introduced the subject of the evening, "Social Health Insurance" in a few words, in which he recounted the appointment of the Social Insurance Commission of California to investigate the problem, its activities since its appointment by the Governor, and the general scope of its investigations.

Mr. Hartley F. Peart, General Attorney for the State Medical Society, then delivered a brief address on "Legal Aspects of Health Insurance." The speaker stated that as no bill had been proposed by the Social Insurance Commission, his remarks would necessarily be confined to a consideration of the proposed constitutional amendment and to some observations of possible problems of administration in the event of the passage of the amendment and the enactment of a bill.

Commenting on the amendment the attorney said that it bore unmistakable evidences of careful drafting designed to repel successful attack as violative of the constitutional guarantees under the Constitution of California; and, particularly, the rights of personal liberty, private property, freedom to contract, and the equal protection of the laws.

"The proposed amendment," the speaker continued, "was quite evidently sponsored as a reasonable exercise of the police power, viz: that attribute of sovereignty corresponding to the right of self-preservation in the individual." He discussed decisions of the Supreme Court of California, dealing with the constitutionality of the Workingman's Compensation Act, the predecessor of this measure.

As to administration, the General Attorney stated that he had little material to comment upon, as the few publications of the Social Insurance Commission contained scarcely anything upon the subject other than the statements that medical examination of workers would not be required, and that free choice of any licensed physician, desiring to practice under the act, would be allowed. As to whether medical treatment would be compulsory, there was a contradiction in the announcements of the Commission. It is stated in one pamphlet that the only compulsion under social health insurance will be "the financial compulsion to insure"; the pamphlet reading: "No one will be compelled to accept the benefits against his conscience or against his will"; while in another publication it is stated, "Health Insurance to be effective must be made compulsory upon the individual worker"; and in another, this statement appears, "The necessity for the element of compulsion to secure effective insurance on the part of all persons who need protection is evidenced by these facts."

The speaker closed with a discussion of the constitutional guarantees contained in the Amendments of the Constitution of the United States, and expressed the opinion that if the Health Insurance amendment passed, and a compulsory law was enacted, close legal questions would undoubtelly be presented in this connection. His conclusion was that in any such far-reaching scheme, covering such a subject, no successful outcome could be hoped for, unless administration of such a health department was entrusted practically in its entirety, to the medical profession.

NUTRITION CLASSES.

A singularly efficient and promising method of improving the nutrition of undernourished school children has been worked out by Dr. W. R. P. Emerson at the Massachusetts General Hospital. The principle requires the co-operation of the child and the home but these are secured with surprising success. And these two requirements greatly increase the educational value of the method. It rests on the thesis of Dr. Emerson that the causes of mal-nutrition are often psychic and that a prescribed diet is not always necessary for their removal. Measured feeding and relief from strain in school are the two essentials.

In these nutrition classes are placed those children who are under weight and under nourished. Each child is given a chart which is part of the equipment of the class and all the charts are compared and their relative advances noted. Each chart shows the normal weight curve for that child with his own weight beneath. When his own weight curve touches the normal he is graduated and given a diploma. There is thus aroused a healthy competition in weight gaining and a great stimulus to improve every possible means for get-

ting better health. The graphic chart method thus not alone gives the doctor the basis for his advice but arouses an earnest endeavor on the part of the children to attain that desired normal weight line.

While this is being accomplished with the child at school, the visitor in the family secures the co-operation of the mother and insures an adequacy of plain food for the child at home. It is seldom actual poverty which has led to the mal-nutrition in the child, so much as the fact that this particular child does not get enough of the food already provided. Often other children in the family are well nourished and plump and yet one or more members are thin and under fed. Here the problem is to see that such a child eats more, has extra lunches, and that a measured amount of food is eaten by him each day. Accurate diet records are of the utmost importance. The home visitor also has the opportunity to advise about sufficient rest, fresh air and proper clothing.

School health work should be a basic and essential element of the educational structure. It is not sufficient or efficient to confine health work to the study of disease. It is both efficient and for children fully sufficient to inaugurate health classes in which the child can be taught personal hygiene and the principles of health out of his own experience. In the Survey for June 1, 1918, Camelia W. Uzzell after describing the excellent results of Dr. Emerson's methods in Boston and New York, says: "The school as the institution that reaches every child, is the logical center for any program of national health, but school health work has heretofore accomplished little, because it has not been made an integral part of the educational system. It is in the school buildings but not in the educational scheme, and no method of health education will be successful until it is made as much a part of school work as reading and arithmetic."

MEASUREMENTS OF AMERICAN SOLDIERS.

Certain considerations in anthropology are of the utmost interest to physicians especially and to all persons interested in social and racial improvement. The relations between certain fixed bony landmarks of the body bear a constant ratio according to race and racial intermixture. The study of the age and development of man is thus a study of his bony landmarks in their changing relations. Ethnology has its roots near this same primitive basis also.

It would seem that the routine examination and measurement of the men of the National Army as well as of other military organizations might to good advantage include a record of certain anthropological data which would be of the utmost scientific interest and value. Such data would be on a scale sufficiently large to allow accurate deductions and would reveal essential characteristics of the national American physique as compared with other races and as blended from other races. This subject has received attention from Dr. Ales Hrdlicka of the Smithsonian Institute and has been the subject of certain observations on the incoming immigrants at Ellis Island before the great war. It deserves serious attention in the present emergency which affords an opportunity that may never again present. With this thought in mind, an inquiry was sent to the office of the Surgeon-General of the Army and as a result there was received the very interesting and instructive article which appears on another page by Arthur MacDonald.

MacDonald recognizes the importance of this opportunity for securing simple data of scientific value in establishing the American cephalic index, or ratio of length to width of skull. He calls attention to the fact that this index greatly enhances the value of all other measurements, whether physical or psychological. He makes the further statement that these two measurements could easily be taken in the routine examination of recruits and draftees and would add perhaps one minute to the length of the physical examination. He suggests the further consideration that the determination of the cephalic index would be a valuable means of further identification of soldiers.

EDITORIAL COMMENT.

An interesting and suggestive paper on "State Board Problems" by Dr. Charles B. Pinkham, Secretary of the California Board of Medical Examiners, was read by title at the annual meeting of the Federation of State Medical Boards at Chicago in February, 1918. Two of his comments are especially worthy of repetition. "The medical society of each state could well afford to establish a publicity bureau under the supervision of a trained salaried newspaper writer who would keep the daily press supplied with articles educationally constructive, thus affording the public an opportunity to become conversant with important problems. The impetus of such a campaign would carry weight in legislative halls and would be of material benefit in effecting a whole-hearted support in efforts to suppress the violator, quack and charlatan." And again, speaking of the advertising medical specialist and quack "clinical laboratory," "the activities of the federal authorities in handling the venereal problem as a part of the national plan of efficiency, will be of material benefit in eradicating this class of medical parasite. It is to be hoped that federal regulation bearing on traffic in salvarsan or other antiluetic specifics will effectively force these 'quacks' to flight or imprisonment."

Did you ever stop to consider what a large and definite number of votes the doctor can influence and often direct at the primaries and elections? It might be worth while for each individual doctor to exercise a little more conscious care in the suggestions and opinions he gives among his friends and patients as to candidates and measures up for election. Even the hardened politician is finding it much to his interest to support men and measures which will receive the active support of the doctors.

An example worthy of emulation is described in the May issue of the State Board of Health Bulletin, where is told the story of the sanitization of the entire district surrounding Camp Fremont in the Santa Clara valley. Every hotel, restaurant, eating house, lunch room, cafe, cafeteria, soda fountain, ice cream parlor, soft drink stand, fruit and vegetable stand, meat market, bakery, grocery, creamery, dairy, and every other place where food is manufactured or sold, has been put in perfect sanitary order. Moreover this condition of perfection is being maintained by frequent and thorough inspections. This means that all such places are clean, screened, flyless, and provided with clean and sterilized dishes and food utensils. Those serving and preparing food are in good health. And altogether, it has been very much worth while. It has given the soldier proper sanitary protection. It is no more than what ought to be done with our present idea of sanitation. Yet why should not similar campaigns be inaugurated in every city, town and hamlet of the state? Why would not the advantages be just as manifest in each of these as at Camp Fremont? If the people want such sanitation they can have it. Why not educate them in its merits and lead them to insist on it?

W. L. Treadway calls attention in the Public Health Reports for May 17, 1918, to certain elements in the personality of feeble-minded children which are not considered in the formal psychological tests so much in vogue and which require the service of a trained psychiatrist to evaluate. He finds certain such constitutional traits of sufficient frequency to justify a tentative classification into types, such as those with shut-in tendencies, those with manic depressive-like reactions, those allied to the manic depressive group, those who show the egoistic and epileptic temperament, and those who show a fatuous temperament. This serves to emphasize the close relation probably existing between the higher types of mental deficiency and those psychic disorders usually regarded as insanity. Recognition of these types of personality in the feeble-minded, permits earlier inauguration of efficient prophylaxis against later social and mental catastrophe, by earlier segregation on the one hand, and by early replacement of vicious tendencies through proper education.

The Owl Drug Company, owning a "chain" of some twenty-five stores in this State, announces that it will operate on a "bone-dry" basis, even to the extent of using every effort to keep alcoholic preparations from soldier and sailor patrons so far as is possible. A few years ago, these stores featured the sale of liquors at "cut" prices and drove a big trade in alcoholics. This is one of the straws that are showing the direction of the air currents in California.

Original Articles

METABOLISM IN DIABETES, NEPHRITIS AND CHOLECYSTITIS.*

By LORENA M. BREED, M. D., Pasadena, California.

In a generously fed community such as may be found anywhere in America to-day, a large majority of the people are overfed, and when people are continuously overfed, sooner or later we find that they have diseases due to a changed body chemistry. The body is a veritable chemical laboratory, with every organ constantly engaged in the chemical processes of elaborating from the ingested food, the chemical constituents necessary for tissue, bone and blood, as well as the power for running the body mechanism and carrying off the waste. Each of the organs of digestion and excretion have individual functions to perform in this process, and their action is inter-dependent and harmonious. The food is dismembered, oxidized, and made ready for absorption into new body cells while the worn out cellular material is simultaneously carried away. Normally, and without overfeeding this is accomplished without friction, but with dietary excesses, a constant stress is placed upon the organs of digestion and excretion. They become overworked and weakened so that waste products accumulate in the body and the delicately adjusted mechanism becomes unbalanced. If the dietary excesses are halted here, the mechanism adjusts itself and goes on normally as before. If not, the stress and friction increases. Not only do waste products accumulate, but poisonous products of imperfect digestion become absorbed into the blood-stream, the mechanism becomes more and more unbalanced by the poisons absorbed, and we have a pathological physiology, due to a faulty metabolism with a possible lowered function of one or more of the overworked organs. Even this condition can be changed by a properly adjusted diet that will allow the tired organs time for rest, recuperation and excretion of the accumulated products of imperfect metabolism. But if the dietary excesses are allowed to continue for months and years, the organ functions become depressed, weakened, and insufficient, and we have as a result a set of symptoms, a clinical entity which we call disease, caused by faulty metabolism, the ultimate cure of which depends upon the degree of insufficiency of the organ or organs concerned. At the present time 95% of all diseases may be classed under this head and by far the most of them are caused by dietary excesses, either general overfeeding or an excess of certain articles of diet.

Of the diseases due to faulty metabolism, diabetes and nephritis are probably the most easily recognized, and in both of these diseases the above statements are borne out by the fact that certain dietary restrictions and adjustments are always followed by improvement, if not complete recovery, especially if recognized while the pathology is still chemical and not cellular.

The primary defect in diabetes is an inability to

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

oxidize glucose as proved by the low respiratory quotient and the elimination of sugar in the urine when ingested. But beyond all this, there is a profound disturbance of metabolism. Not only is sugar excreted in the urine, but the threshold in the blood is raised, the acid-base balance is disturbed, together with a disordered fat metabolism. Formerly, when the treatment of diabetes consisted chiefly in removing or restricting carbohydrates and allowing a high protein-fat diet, we did not know the serious results of such a course, since we could not follow the fate of the fats in the blood. This is now made possible by the work of Bloor and others, and in the light of recent work, it would seem that the disordered fat metabolism is due to an overwork of the fat-burning mechanism, together with a lowered power for metabolizing carbohydrates. This leaves an insufficient amount of available carbohydrates to completely burn the fatty acids which accumulate in the blood, and thus become the chief source of the dreaded acidoses. Joslin, who together with Bloor has followed the fat metabolism in a great number of diabetics, says: "With an excess of fat diabetes begins and from an excess of fat diabetics die."

Using Bloor's method, we have during the past year made routine estimations of the total fatty acids and cholesterol of the blood on, not only the diabetics, but on all of our metabolism patients, and while the blood lipoids vary with the amount of fats ingested, diabetics invariably show a high content of fat metabolites and a correspondingly low carbonate-content, with a high blood sugar threshold. A reduction of the fat intake to a minimum, invariably results in a lowering of the metabolites in the blood, a lowered blood sugar threshold with a corresponding increase in the carbonate-content. On a continued low fat, or fat free diet, the carbohydrate tolerance becomes greater, since with an absence of unburned fatty acids in the blood, the alkalinity is restored, and the glycolyptic power is increased. The most important constituent of the blood, by which it preserves its alkalinity, is sodium bicarbonate, which occurs both in plasma and in cells. Howland considers the blood as first, a solution of bicarbonates, which if kept up to normal is able to transport enormous quantities of $C O_2$ to the lungs without harm or strain. This stream of acid, he says, in an adult is the chemical equivalent of several hundred cubic centimeters of concentrated hydrochloric acid. Henderson has called the carbonates the first line of defense in protecting the body from acidosis, and while both the respiratory apparatus and the kidneys act in a regulatory manner to preserve the acid-base equilibrium, yet it is a great time saver and often a life saver to defeat the enemy on the first line of defense, for by the time the $C O_2$ in the blood and alveolar air is lowered, the non-volatile acids pouring into the blood have already overcome the first line of defense and the alkali reserve is near exhaustion.

A young man of 23 years complaining of headache and drowsiness was found to have very high blood lipoids and blood sugar, glycosuria, but not a high titratable acidity. The carbonate-content of the blood had almost disappeared, yet the $C O_2$ of blood and alveolar air was not lowered. His diet had been rich in fats and low in foods containing bases. On a diet rich in base producing foods and low in fats, all unpleasant symptoms disappeared, but it was several weeks before the chemistry of the blood was normal. This case might have developed into diabetes, since the one-sided diet and subjective symptoms had been of long standing.

A diabetic girl of 12 years who had been sugar free for nearly a year suddenly began to grow tall, with other signs of approaching maturity. She was at the beach and with other children went surf-bathing every day. In an effort to meet the great demands of growth and exercise, the diet was considerably increased, including some butter and whole milk. For two successive days the fats reached 85 grams. Immediately the output of sugar, total nitrogen, and creatin in the urine were increased and for the first time during eighteen months of observation, diacetic acid appeared. With a reduction of the fat intake to a minimum, the output of sugar decreased and the diacetic acid disappeared entirely.

A fat diabetic man of 50 years with gangrene of one toe had become sugar free, with a constantly increasing carbohydrate tolerance. By mistake he received 40 grams of fat on two successive days, and while no sugar appeared in the urine, the blood sugar doubled in percentage, but again dropped to normal on a fat free diet.

A diabetic man of 60 years, very emaciated, came to us on a diet of 70 grams each of proteid, fat, and carbohydrate. Blood lipoids and blood sugar were very high and the carbonate content correspondingly low. His carbohydrate and nitrogen balance were both minus, so that he was really starving. His fat intake was reduced to a minimum, and within three weeks he was sugar free with a tolerance for 100 grams of carbohydrates and 60 grams of proteid. Within three months he was in positive nitrogen balance, and still sugar free with a tolerance for 130 grams of carbohydrates, 90 grams of proteids, and 20 grams of fats, but any further increase in the fat intake caused an output of sugar.

Acidosis is the only thing we really fear in diabetes, aside from an inter-current infection. The acidosis can be controlled and the alkali-reserve maintained by a removal or restriction of fats, and a proper amount of base producing foods. The sugar threshold in the blood is always raised by an acidosis, which produces a lowered kidney function, and if we could but ascertain, we might find that all cases of diabetic coma were due to a lowered kidney function, caused by acidosis. It is therefore evident that an estimate of the carbonate content, together with the blood lipoids and blood sugar, is not only valuable, but is necessary in the early diagnosis and treatment of not only diabetes, but any condition of faulty metabolism.

A young woman nearing the close of her first pregnancy, suddenly developed albuminuria, and edema, together with a defective vision. A chemical examination of the blood revealed high blood lipoid, blood sugar, and non-protein nitrogen, with an ex-

haustion of the carbonate content. She had exhibited, during her pregnancy, an abnormal appetite for fats together with a dislike for sweets or desserts. A blood count revealed the red cells below 2,000,000 and the hemoglobin below 40%, and the cause of the disturbed vision was found to be due to a detached retina. The fats were entirely removed and a diet consisting of rice gruel and toasted crackers was given for several weeks, then vegetables and other base producing foods were added. Improvement was immediate and continuous. Within a month albumin and casts had entirely disappeared, the carbonate content had returned to normal, and the red cell count was 4,000,000 with the hemoglobin 50%, and within three months she appeared normal in every way, on an ordinary diet including fats. Evidently this case was not the clinical condition known as nephritis, but an acute acidosis due to a one-sided diet which resulted in a temporary lowering of the kidney function, which again became restored by adjusting the diet, so that the body chemistry returned to its normal balance. This acidosis resembled that of diabetes in that it was due to an accumulation of fat metabolites in the blood, with a lack of available carbohydrates to completely oxidize them, and their continued presence exhausted the carbonate content. We may find acidosis in varying degree, under any condition of a one-sided diet, with a lack of base producing foods, and the symptoms may be those of lowered pancreatic function or lowered kidney function, if the acidosis is extreme, with resulting symptoms of toxemia.

The primary function of the kidney is to excrete water, sodium chloride, and total nitrogenous wastes, consisting of urea, uric acid, ammonia, creatin, and creatinin. If the function is sufficiently lowered, the kidneys become unable to secrete and excrete these materials and as a consequence, they accumulate in the blood and tissues, causing varying degrees of intoxication. The symptoms also will be varied according to whether the kidney is insufficient for all of the nitrogenous constituents, or for one alone, but a differential blood nitrogen will determine which ones are in excess. When the total nitrogenous output is less than the intake, we must determine whether the surplus is stored in the tissues, or whether it is piled up in the blood. If, together with a positive nitrogen balance, we have an increased blood nitrogen, it is pretty definite evidence that the kidney is at fault, and this can be determined by reducing the intake of nitrogenous foods, when, if the kidney alone is at fault, there will be a decrease in the non-protein nitrogen of the blood. The tests of kidney function which we have come to rely upon, are three which we combine into one, viz: the Mosenthal Nephritic Test Diet for three days, making two-hourly estimations of urine volume, specific gravity, total sodium chloride, and total nitrogen, with an estimation of blood nitrogen and phenolphthalein at the beginning and at the close of the test diet. We then ascertain the patient's tolerance for nitrogen or sodium chloride, and place them on a diet slightly below their minimum tolerance, being careful not to allow a positive nitrogen balance. If the carbonate content of the blood is lowered in nephritis, an increase of base producing foods will increase the tolerance for proteids and lipoids. Usually a complete carbohydrate diet is first instituted in such cases, followed later by an increase of proteids to the kidney tolerance, together with especial attention to any digestive disturbance, since the origin of most of the nephritides may be found somewhere in the digestive tract.

Another condition which causes serious metabolic disturbances, is cholecystitis, and we have found that the Mosenthal diet serves as good a purpose in testing the function of the liver as of the kidney. Indeed in a large number of cases in which nephritis was suspected, we have by this test found an unsuspected cholecystitis. While in nephritis we find with a positive nitrogen balance, a corresponding increase of non-coagulable nitrogen in the blood, in cholecystitis we also have an increased blood nitrogen but a large negative nitrogen balance. Obviously, this increased nitrogen is absorbed into the blood stream from the intestinal tract, since the three days' heavy proteid diet is invariably accompanied by a constantly increasing indicanuria.

It has been found that the formation of phenol and phenolic substances are due to intestinal bacterial action which, under normal conditions are harmless. The putrefactive organisms break up the protein into toxic substances which as Baumann has demonstrated are very poisonous, but when united with sulfuric and glycuronic acids to form sulphates and glycuronates, they lose their toxicity. The function of the liver is multiple, for besides the secretion of bile in which perhaps each individual cell participates, it takes part in the formation of glycogen and urea. The greatest function, however, is that of detoxification. This is accomplished in two ways, first by the withholding of toxins, and secondly, by the conjugation of sulphates and glycuronates. The toxic aromatic radicals produced by the decomposition of protein are normally conjugated in the liver with sulfuric and glycuronic acid and are then excreted in the urine. With a cholecystitis, there is an insufficiency or perversion of bile, and instead of flowing freely through the bile channels, they become clogged and this pressure constantly exerted upon the liver cells produces an impairment of liver function, and this organ which is the first line of defense in ridding the blood of toxins, is overwhelmed by the mass of putrefactive material which floods the cells so that they cannot exercise their disinfective properties. The putrefactive bacteria gain unopposed sway; intestinal toxins filter in to the circulation and the entire body suffers from an intoxication, the effect of which may be felt upon the heart, the kidneys, or the arterial system, causing tachycardia, nephritis, or high blood pressure, or a combination of all. Work has recently been done which shows that a number of substances occur in infusions of putrid meat, which if injected into animals will raise blood pressure. Such substances may be formed in minute quantities during the process of putrefaction in the alimentary canal and absorbed into the general circulation.

A young woman of 23 years was supposed to

have hyperthyroidism, on account of her tachycardia, high blood pressure, excessive perspiration and constant loss of weight. Upon careful examination by a surgeon, she was told that there was no trouble with the thyroid, but was advised to have some observation of body metabolism. We found her in constant negative nitrogen balance but with a high blood nitrogen. There was intestinal putrefaction with intense indicanuria. The proteids and fats were reduced to a minimum and the body requirements made up by carbohydrates. The intestinal putrefaction grew less, the indicanuria disappeared, blood pressure and tachycardia were much reduced and there was a gain of three pounds in weight during the first month.

A woman of 50 years with a high blood pressure had been treated for twelve years for diabetes. She had a high blood sugar and glycosuria, high blood nitrogen, but was in negative nitrogen balance. On a diet of rice gruel and crackers, the intestinal putrefaction which was extreme cleared up entirely, and the blood pressure came down from 240 to 175 within ten days. The glycosuria disappeared and the blood sugar became normal.

A woman of 50 years with extreme tachycardia showed a very high blood nitrogen and an extreme negative nitrogen balance. On a carbohydrate diet which relieved the intestinal putrefaction, her symptoms became gradually better.

These patients, together with a large number of others with similar symptoms, all gave evidence upon further investigation of cholecystitis, some were confirmed by operation, after which their tolerance for proteid digestion became greatly improved. In all of these cases as shown by the differential nitrogens, the negative nitrogen balance was proved to be not due to loss of body musculature, but was absorbed as split products of protein from the intestinal tract and re-excreted.

Roger believes that glycuronuria is to date the most practical index of the protecting power of the liver and emphasizes the instructive importance of determining the condition as a routine procedure when there are abnormal symptoms. Indicanuria is also a reliable index when present, though large amounts of indican as well as glycuronates may be excreted in health, yet a constant excessive production is a sign of over-stimulation, and may be the danger signal of approaching liver insufficiency.

We are gradually finding explanations to previously obscure conditions, and thus coming very close to nature and may yet hope to come into complete command.

125 South Grand Ave.

The first factory established in the Commonwealth of Australia for the manufacture of artificial limbs for returned soldiers was formally opened on April 8 at Caulfield, Victoria. In a short time it is proposed to open similar factories in each of the other States in the Commonwealth, those to be established at Sydney and Brisbane to be completed first. The entire project is under the direction of an American, who has factories in the United States.—Commerce Reports, May 29.

AUTOGENOUS COLON VACCINES IN ECZEMA.*

By JAMES A. JACKSON, M. D., and RAWSON J. PICKARD, M. D., San Diego.

The etiology of eczema is a maze in which one may easily become lost. Eczema, like many other dermatologic diseases, so-called, is probably only a symptom. Imperfect metabolism, internal irritants of digestive, renal, even mental and nervous origin, account for three-fourths of the cases, the remainder being due to external irritants.

In this inflammation Stelwagen states there is always an "unknown quantity," a "necessary something" which is the ultimate basis for this particular symptom in the individual. A closer co-ordination of the efforts of the dermatologist (heretofore too often concentrated on the external evidence alone)—the internist, gastro-intestinal expert, the pathologist, the dentist even in certain cases, is requisite if we are to demarcate properly the various groups of cases for etiologic treatment.

Medalia in a thorough study of fifty cases of obstinate chronic eczema has separated a group in which an original transitory dermatitis is changed into a true eczema by secondary bacterial invasion. This he demonstrates by the absence of bacteria in the lesions in the primary stage, abundant growth in the secondary, eczema lesions, and the clinical response to specific vaccines. His cases were nearly all due to varieties of staphylococcus, in a few accompanied by streptococcus, and together with the usual treatment, autogenous vaccine in large doses —6000 million and more was used, "yielding by far the best results in the treatment of this intractable disease." (He reports 51 cases, 43 cures, 8 had one or more recurrences easily controlled, 6 improved, no change one, unknown one. Average duration of treatment 11 weeks. Average duration of disease 8½ years).

A second but very small group of cases isolated by Wood are due to the absorption of bacterial endotoxins, and are anaphylactic in character, similar to the rash from scarlatinal angina. These were cases due to focal infection in the teeth and nasal sinuses. Streptococci were isolated in the majority of cases, and vaccines (together with local treatment of the various lesions) brought the cases under control. In such cases the dose of vaccine should be very small, as the power of digesting toxic split proteins is but slowly acquired.

In formulating a new hypothesis we do not wish to quarrel with working theories previously demonstrated. We wish to present certain facts which we think establish a group of cases of eczema on a definite basis for treatment.

Several cases of toxic eczema occurring in Dr. Jackson's practice showing a high indicanuria, in a few accompanied by casts, were interpreted by us as demonstrating an intoxication from the bowel. Indican is of course non-toxic in itself, but is a gauge of the degree of intestinal putrefaction producing poisonous toxalbumins which we have no means of estimating directly. In these cases with much indican, and no albumin but with casts, the

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

CASE	CLINIC NOTES	DURATION	VACCINE	REACTION	RESULT
1.	Chronic squamous eczema, soles feet, Indican XX.	Periodically 2 years	3 a week	severe	Cure four weeks
2.	Acute toxic eczema, fore arms and hands, Indican.	3 weeks	2 a week	slight	Cure
3.	Hyperkeratosis palms and soles feet. Painful fissures. Indican, plus.	5 years	3 a week	severe	Cure of palms in 2 months. One foot cured, other fluctuates.
4.	Acute type eczema, hands and arms. Indican X.	1 year	2 a week	moderate	Improved at fourth treatment (2 weeks). Cure 2 months.
5.	Toxic eczema thighs. Indican XX.	2 weeks	3 a week	severe	Cure. Lesions disappeared several times after vaccine, but returned. Cure 2 months.
6.	Eczema, face, hands. Indican XX.	6 months	2 a week	severe	No local treatment. Rapid improvement at first, returned. cure in 2 months.
7.	Eczema wrists. Indican XX.	2 weeks	2 a week	slight	Immediate decrease itching. Cure 6 weeks.
8.	Acute type eczema, hands and forearms. Indican X.	1 month	2 a week	severe	Cure 1 month.
9.	Pityriasis Rubra general, Indican X.	3 years	2 a week	moderate	No result.
10.	Eczema buttocks Indican XX.	6 months	2 a week	severe	Slight improvement.
11.	Eczema hands. Indican XX.	6 months	3 a week	severe	Cure 1 month.
12.	Eczema back of neck, hands. Indican XX.	1 month	3 a week	severe	Improvement marked, recurrence on neglect of treatment. Rapid improvement and cure on resumption of colon vaccine.

latter were considered as additional evidence of the irritation of the intangible toxins passing through the kidney, the source of which was pointed out by the indican.

The theory was formed that this improper decomposition within the bowel and the resultant lesions in the mucus (Barr states that indican is not absorbed from the intact membrane) were the product of the metabolic activity of the type of b. coli prevailing, and that immunization of the individual to this noxious biochemical character of his colon bacilli might change their habits of growth at least to the extent of rendering them normally harmless to him again.

B. coli was isolated from the feces on Endo medium. Culturally nothing unusual has been found in the growth of the organism, nor is this to be expected. The vaccine is prepared in the usual way but in rather high concentration, 2 to 4 billion per mil. Colon bacilli are ordinarily given in initial dose of 25 million, and Satterlee in treating cases of chronic intestinal stasis with specific colon vaccines used a maximum of 300 millions, reactions being very severe. In the chronic conditions in which vaccines find their greatest field of use the upper limit of dosage should never be fixed. The guide should be the reaction, local and clinical. A minimal dose at the beginning can be readily increased, avoiding a too severe local reaction; should such occur, giving a smaller dose next time. The interval at first should be the subsidence of the local reaction; when the dose is established the interval should be 3 to 7 days. In acute cases dosage should be small to avoid negative phase. Thus guided, Dr. Jackson found that a dose greatly in excess of that prescribed as the maximum had to be given in the toxic eczemas studied; in some cases the dose was gradually increased to 3000 million.

The result of autogenous colon vaccine therapy in cases with excessive amounts of indican was so good that the experiment was extended to other cases showing only small amounts, and later to a third group with no indican (to Obermayer test, used in all cases with no refinements, in order not to force cases). We thought that possibly the disease was an anaphylactic condition, and the cures a result of non-specific reaction; however, this does not seem to be true as the ratio of cure dropped, and the cases with no indican are no better for the addition of vaccine to the treatment, those with a trace showing enough improvement in instances to make the experiment worth while.

On account of Dr. Jackson giving up his practice to enter the Government service, we are unfortunate in not being able to present a larger group of cases with indicanuria; however, our object is rather to invite similar study on the part of men in charge of clinics in larger cities.

We have twelve cases with indicanuria, of whom nine were cured, two showed no result from vaccines. Twenty other cases with traces of indican, or no indican, showed improvement and cure attributable to the vaccine in three cases, and slight benefit in one.

In all cases a simple diet was prescribed, elimination was watched, and the usual mild, local applications made, except in cases 11 (a physician), 1, 3 and 6, in which the vaccine was used alone. Our confidence in the vaccine arises from the shortened time of treatment, based on experience with the refractory nature of many of these kinds of cases; on the relation of time of cure to the duration of the disease, several cases having quite gone the rounds and in certain cases (5, 6, and 12) by improvement immediately following vaccine and relapse on its suspension.

We have then a new group of eczema cases, in which there is a perverted metabolism of the individual's colon bacilli, possibly a mild inflammation (an eczema) of the bowel itself, with toxemia, and eczema in the susceptible skin. Through the use of the specific vaccine the individual immunity is reestablished, the colon bacilli subside to their ordinary habits of growth, losing their acquired virulence, and the symptoms disappear.

References.

Baar: Apr. 4, 1914, N. Y. Med. Jour., vol. xcix, No. 14, page 669.
Gilchrist: Dec., Jour. Cut. Dis., N. Y., xxxi, No. 12.
Medalia: Aug. 5, 1915, Boston Med. Surg. Jour., clxxiii, No. 6, p. 187.
Satterlee: Nov. 1916, Am. Jour. Med. Sc., cli, No. 5, p. 727.
Stelwagen: "Diseases of the Skin."
Wood: Dec. 1915, Urologic and Cut. Review, vol. 19, No. 12, p. 680; No. 6, p. 187.

GRANULOMA OF THE LARYNX.*

By J. M. BROWN, M. D., Los Angeles.

The occurrence of granulation tissue in tuberculous and syphilitic lesions of the larynx is common, and even in these lesions it rarely attains any size, owing to the frequent association of ulceration, but a mass of granulation tissue in the larynx not associated with those infections is of sufficient rarity to warrant my reporting a case. The following cases are typical of the specific types:

H. Tilley reports a case of granuloma of the left vocal cord in a man aged 54, having a history of syphilis, which entirely disappeared under treatment directed to this disease. Jefferson Faulder reports an extensive granuloma in the inter-arytenoid space in a man aged 21, having an active tuberculous lesion in both apices. Harmon Smith reports a case in a woman aged 32, of a granuloma in the inter-arytenoid space, in which there was a positive Wassermann and the presence of tubercle bacilli in the sputum.

The only case that I have been able to find reported of the non-specific type is that of St. Clair Thomson, who reports a case in a man aged 40, of a pedunculated mobile tumor, adhered to the free edge of the right vocal cord just anteriorly to the processus vocalis. The pathological report was that the tumor consisted of fibrin and granulation tissue, covered by a squamous epithelium which showed no evidence of malignant change. The tumor was removed and no return noticed six months after operation. Thomson further comments on the fact that they are so rare that no mention is made of this type of tumor in his textbook.

My case, Mrs. C., aged 30, came to my clinic at the Graves dispensary of the University of California in January, 1917, with the following history: On April 21, 1916, she was shot in the neck with a 32-calibre pistol. The bullet entered on the left side just behind the sterno-mastoid, traveled forward to the larynx, penetrated the thyroid cartilage a little to the left of the center, just above the cords, was then deflected to the right, making its exit just in front of the sterno-mastoid. The wound of entrance healed rapidly; that of exit made a very slow recovery, taking about three months before it was entirely healed. There was a bloody discharge from the larynx dating from the time of accident. For about a month this was tinged with pus and then later it became mostly purulent with an occasional tinge of blood. This discharge continued until the last granuloma was removed. In August her voice became hoarse. In November she was only able to whisper and this has continued up to the present. In December she began to have difficulty in breathing, which increased up until the time she came under my care.

Examination: Both external wounds completely healed; larynx, a mass, dark red and granular in appearance, fills the anterior two-thirds of the larynx. It moves up and down with respiratory movements, bleeds easily, and is apparently free on both sides and posteriorly, and attached anteriorly. The vocal cords could not be seen. The patient was sent to the hospital and prepared for operation at once. All efforts to explore the larynx by direct methods with local anesthesia were unavailing. Ether was then given, and as the anesthesia advanced, the respiration became so difficult, it was deemed wise to do a preliminary tracheotomy, which was immediately done, and no further trouble from the breathing was experienced. The patient was now suspended by the Killian apparatus. The mass was easily outlined and the observations made by indirect laryngoscopy confirmed. The large portion of the mass was removed with a snare and the balance by forceps. The origin of the mass was just left of the middle line and above the left cord, and from a depressed wound about one-fourth inch in diameter in which a probe entered to the depth of one-fourth inch. The left cord was found completely paralyzed. The tracheotomy tube was removed on the third day. The pathological report was that, "the sections show the tissue to be made up chiefly of a loose connective tissue which is infiltrated with small round cells and red blood cells. The connective tissue cells seem to be quite young and have the appearance of cells in granulation tissue. The round cell infiltration is quite diffuse, there being no area in which collections of cells occur. The surface seems to be covered by a thin, poorly staining layer of epithelial cells. The picture is one of chronic inflammatory granulation tissue. There apparently is no evidence of malignancy."

Two weeks following there was a new growth about the size of the original. All endeavors to reach this by local anesthesia were useless. Under ether the growth was removed by direct methods and suspension apparatus. Patient was discharged from the hospital and sent home three days later.

March 21, 1916, patient returned with a history of difficult breathing at night. There was a mass found about half filling the larynx which by careful maneuvering I was able to remove with the snare by indirect methods and cocaine anesthesia. April 3, 1916, found a new mass. This was removed with less difficulty than the last. June 12, 1916, returned with a new growth. Removed with little difficulty. June 29, 1916, returned with a new growth, which I was able to remove without the aid of any anesthesia. Between this date and March 21, 1917, seven growths of various sizes were removed without the aid of any anesthesia.

It is now over a year since the last one was removed. A careful examination shows a perfectly clear larynx. The left cord is still paralyzed.

References.

Sir St. Clair Thomson.
British Journal of L. R. and O., Sept., 1915.
H. Tilley: Royal Society of Medicine Proceedings, v. 6, 1913; Laryn. sec., p. 61.
T. J. Faulder: Royal Soc. Med. Proc., v. 6, 1913; Laryn. sec., p. 108.
Harmon Smith: Laryngoscope, April, 1918.

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

XANTHOMA TUBEROSUM MULTIPLEX.

By ANSTRUTHER DAVIDSON, M. D.,
Associate Professor of Dermatology, College of Physicians and Surgeons, Los Angeles, Cal.

Mrs. A. B., aged 45, weighs 150 lbs., is the mother of five children and has always enjoyed perfect health. She passed through the ordinary infectious diseases in childhood and has never been ill since. She has never had jaundice.

Ten years ago a small subcutaneous thickening appeared on the flexor tendon near the second phalangeal joint. While this slowly enlarged other spots appeared first on the elbow then in succession on the hands, feet, knees and hips. All at first were yellow or buff colored, slightly raised, elevated and flattened papules similar to those now presenting on the hips. The older lesions on the extensor surfaces have gradually assumed their present shape.

She now presents two tubercles on the left hand as shown in the illustration, one similar on the second finger of the right hand has been removed, there are a few small ones showing on the distal joints of two fingers on the same hand. On the palmar surfaces the flattened yellow masses have coalesced into a continuous band, nearly the width of the finger on the fifth and forefinger and on the bases of their metacarpals. In the flexures of the digits the lipoid material has been molded by pressure into raised cross ridges.

Fig. I.
Single Tubercles on Knuckles.

Fig. II.
Elbows—Grouped Tubercles.

Fig. III.

On the feet the tubercles on the extensor surfaces resemble those on the hands but are somewhat flatter on account of the pressure of the shoes. The most striking feature of the lesions on the feet is the symmetry of shape and distribution. On the extensor surfaces of both feet the middle joints of the fourth and fifth toes had large, single tubercles like those on the hand . On the soles of both feet the lesions were flattened out and formed a large circular patch over the ends of the first, middle and fifth metatarsals where the pressure of the foot normally comes. The inner and inferior surfaces of both big toes, the tips of the third and fourth toes on the right and the tip of the little toe on the left were likewise affected. One large nodule the size of half a walnut occupied the insertion of the tendo achilles on the right.

Those on the soles resembled ordinary calluses with yellowish centers. On the knees were nodular and papular forms, ten above the right patella, five above the left and three below. Over the elbows the tubercules had coalesced into a mass as shown in the illustration.

Over the ischial tuberosities on both sides in a circle four inches in diameter there were fifty papules, all flat except one in the center of the right group which had developed into an elongated nodule.

In this case as all stages of the disease were represented, the method of growth was easily followed. The flat yellow papules slowly increased by accretion of the yellow deposit which gradually assumed a nodular form with abrupt sides. At this stage whether due to direct irritation from the xanthomatous deposit or to vascular changes produced by the original cause, there begins the formation of dense fibrous bands around each nodule. These in time contract and make more prominent the central nodule, the various growths coalesce in their contiguity and form such tumors as are represented on the elbow. These latter were irregular in shape showing yellow islands surrounded by the dark fibrous intergrowth, the whole of such consistency as to resemble a piece of conglomerate embedded in the skin.

VINCENT'S ANGINA, WITH REPORT OF A CASE.*

By JOSEPH M. KING, M. D., Los Angeles, Cal.

In presenting the subject of Vincent's angina to you to-day I am actuated by a desire to call your attention to what I believe to be a very common affection not commonly recognized, to excite discussion of its management, to call attention to the great diversity of treatments which have been advocated, and to report an unusual case.

First accurately described by Vincent in 1896, with a report of 14 cases in 1898, it was not until 1902 that Emil Mayer first reported a case in the United States, and it is only during the last three or four years that knowledge of the disease is becoming general. Of late a number of series of cases have been reported, one of the more recent communications being by Drs. Campbell and Dyas, Captains in the Canadian Army, who, in the Journal A. M. A. of January 2, 1917, report 129 cases as having passed under their observation in four months, thus showing its considerable prevalence among the armies on the Western front. They say "Now (however) it is so prevalent that it may be classed as among the commonest of disabilities among the troops." It occurs chiefly in children and young adults and is undoubtedly frequently overlooked, due on the one hand to lack of knowledge of the condition, and on the other hand to the unreliability of the clinical diagnosis and to the added fact that its organisms cannot be easily grown on cultures, so that these do not disclose the true condition.

Two organisms are present in this affection, a fusiform bacillus and a spirillum. The bacillus is non-motile, two or three times as long as the diphtheria bacillus, and has tapering ends, from which it obtains its name of bacillus fusiformis. The spirillum, never found alone, is a long cork-screw-like organism with four or five turns or more, forming a network in which the bacilli lie. Both organisms are Gram-negative. As these or organisms closely resembling them have their normal habitat in the mouth, for purposes of diagnosis it is essential that smears be carefully taken from the affected parts, preferably from the deeper layers of an ulcerated surface, and that these smears be examined by a laboratory worker thoroughly familiar with the bacteriology of the mouth. Both organisms, believed by some to be different stages of the same organism, are anaerobic; cultures therefore are extremely hard to grow, and smears made directly on the slide or cover glass are best for examination.

While the mucous membrane of any of the upper respiratory passages may be affected, practically only those of the mouth and fauces are attacked—the great majority of cases, although the disease is by no means confied to the tonsillar area and pharynx, as the gums are frequently the initial tissue invaded, while in the severe cases an extension to the epiglottis, the larynx, or even the trachea and bronchi occasionally occurs. The lesions are of two kinds, the one a diphtheroid condition characterized by a pseudo-membrane resting on an ulcerated and bleeding surface, in which condition the fusiform bacilli alone are said to exist, the other an ulceromembraneous form, with destruction of tissue. These ulcerations are usually unilateral, involving by preference the upper pole of one tonsil, and are from the size of a pea to that of a quarter dollar, from one-eighth to one-half inch deep, with irregular edges. The ulceration by no means confines itself to the tonsil however, but may extend so that the mucous membrane of practically the entire pharynx or of the gums or cheeks, the uvula, or indeed the soft palate itself may be entirely destroyed. The lymphatic glands of the neck are enlarged.

Undoubtedly contagious, its transmission depends upon close contact, such as the common use of eating or drinking vessels. It does not spread among ward patients who have no immediate contact with each other. While frequently found among those in robust health whose sanitary surroundings are unquestioned, it is more prone to attack those whose surroundings are unhealthy, or whose vitality is lessened by previous disease, as it frequently follows measles, scarlet fever, whooping cough or diphtheria. Carious teeth and oral sepsis are predisposing causes as well as the abuse of tobacco.

There seems to be a great diversity of opinion regarding the affection, some authors describing it as a chronic disorder of the throat accompanied by slight membraneous formation, not causing the patient any great inconvenience, but difficult to cure. Others merely call attention to the ulcers which may form, and many give no consideration to the constitutional effects. Those, while correct in their description of the conditions, which they have seen, seemed to have missed the important point that it takes on different forms in different patients. Four classes of cases may be recognized, namely: (1) the mild acute cases, embracing the great majority, running their course in from a few days to a couple of weeks or so, (2) the severe acute cases, (3) the chronic cases with slight acute exacerbations from time to time, the chronic carriers, corresponding to the better known diphtheria carriers, and (4) the severe chronic cases with extensive ulceration, great prostration and severe emaciation. running a course as long as three or four months.

As commonly seen, Vincent's angina is not of such a nature as to confine the patient to his bed for any considerable period, the cases which resemble an acute tonsillitis being most frequent. The tonsils are swollen and red with patches of a yellowish white membrane on them, and often seen on the pharynx as well. This membrane is superficial and easily removed from the ulcerated bleeding surface beneath. It is much more superficial in character than the membrane of diphtheria, hence the name pseudo-membranous angina, which the disease is often called. Swallowing is difficult, the cervical lymph glands are enlarged, there is moderate fever, up to 100° or 101°, although occasionally to 103° or so, but there is not usually

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

much headache, myalgia or prostration, nor as a rule are the pulse and respiration markedly increased. In quite a percentage of cases the lesions are on the gums, resembling pyorrhea. Indeed, Bowman, from the study of one hundred cases among English troops conceived the idea that the disease was but another stage of pyorrhea alveolaris which had spread from the gums to the mucous membranes of cheeks, tonsils, or pharynx, and that noma was the acute malignant form of this disease, while that involving the tonsils was known as Vincent's angina. It should be noted, however, that this gingivitis differs from pyorrhea in being ulcero-membraneous in character, and without pus or pus pockets. Many cases have this affection of the gums for a long time before the tonsils or pharynx are affected, and it often persists after the lesions in these localities have healed. As the disease advances superficial ulceration may appear, usually of one tonsil. In the great majority of cases recovery takes place spontaneously in a week or ten days. In others, however, the ulcerations become deeper and spread more widely, involving extensive areas, and may go on to ulceration of the larynx or trachea, with a febrile course covering weeks, the patient eventually recovering, or occasionally succumbing to the disease, usually from a complication, as ulceration of the larynx, broncho-pneumonia, pyemia, brain abscess, or as in the case I report to-day, from exhaustion. In addition to these moderately acute and these chronic cases are a large group with only a slight membranous formation on the throat, without effect on the general health, the slight irritation causing the patient to examine his own throat where he finds a little patch of membrane. These cases are often chronic in their course, exacerbations from time to time, and if seen by the physician at all, are seen in the office of the laryngologist. Many of the more acute forms also die down into this mild chronic form, with only a little affection of the gums or an occasional patch in the throat. These throats, thus irritated are more ready hosts for the diphtheria bacillus, and furnish a very suitable tissue for the continued propagation of this organism, so that it is possible that many of the diphtheria carriers are made so by the concomitant presence and activity of Vincent's organisms. And, lastly, there are a few cases coming on with high fever, great prostration, much swelling of the throat with great difficulty in swallowing, resembling a suppurative tonsillitis or a severe diphtheria and often mistaken for it, but in which no diphtheria bacilli can be found, and on which diphtheria antitoxin has no effect, running a fulminant course. As a rule the mucous membrane of the cheeks is also involved in these severe acute cases.

While the diseases with which Vincent's angina are said to be most commonly confounded are diphtheria and secondary or early tertiary syphilis, I feel certain that many cases of so-called follicular tonsillitis, which present patches of membrane off the tonsils would show Vincent's organisms in the smears. From diphtheria and syphilis it can be distinguished by the laboratory worker, and probably the great majority of cases supposed to be diphtheria but without the presence of the Klebs Loeffler bacillus would have their diagnosis cleared up by the examination of a smear preparation. The absence of a positive Wassermann differentiates it from syphilis, although the presence of a positive Wassermann reaction should by no means be taken as conclusive evidence that the lesion is syphilitic, but smears should be examined as well, for in this affection, as in many others, notably carcinoma, it cannot be too strongly emphasized that the presence of a positive Wassermann reaction by no means proves that the condition for which the patient consults us is syphilitic.

Many forms of treatment have been used, each with its champions, but the multiplicity of drugs wanted as cures is the best evidence of their futility. The great majority of cases, doubtless, recover without particular treatment. Many others yield to rest and supportive treatment with antiseptics used locally, and local treatment is undoubtedly of first importance. Some require and are benefited by the arsenical preparations, while a few are resistant to any form of treatment. The tincture of iodin has been much used locally, being applied once or twice daily. It has been especially recommended in those cases with extensive ulceration. Nitrate of silver has been used in solutions of all strengths by various observers. Place uses a two per cent. solution of chromic acid once daily, first cleansing the ulcer with hydrogen peroxide. Halsted and also Green cauterize the ulcer every two or three days with a solution, 2 or 4%, of trichloracetic acid, after local anaesthesia. A 0.5 per cent. solution of formaldehyde is used freely as a mouth wash at the same time, or, in case of extreme fetor, a weak permanganate solution. Favre cures all cases by cleansing out the ulcerations with 10 per cent. silver nitrate, followed by the application of 1 per cent. methylene blue solution. Harper paints the affected area once with a solution of bichloride of mercury, 1 to 100, and then paints the throat daily with a solution of nitrate of silver, 30 gr. to the oz. If at the end of a week either organisms are present he again uses the bichloride solution, stating that it is rare that more than two applications are necessary and that in the majority of cases one application suffices. Stark reports twenty-five cases treated with sodium perborate which splits up in the mouth, forming nascent peroxide of hydrogen. Two teaspoonfuls are dissolved in a glass of water, this making a saturated solution, which is to be used frequently as a mouth wash and gargle. He reports almost miraculous relief of pain, and cure in a short time in all cases. Where the gums are affected Bowman recommends that a mixture consisting of four drams of wine of ipecac, one dram of glycerine, and three drams of solution of arsenic be applied locally with an applicator or tooth brush. In addition to these iron, both Monsol's solution and the tincture of the chloride, potassium chlorate, Seiler's solution and many others have been used locally. Orthoform tablets relieve

the dysphagia. Acting on the theory that, as Vincent's angina is caused by a spirillum, arsenical preparations should be beneficial, many have used them both locally and internally. Both salvarsan triturated with glycerine, and also Fowler's solution have been used locally. Internally Fowler's solution, and also sodium cacodylate given hypodermically have been highly recommended. The treatment which has seemed to give the best results in stubborn cases has been the intravenous administration of salvarsan or neosalvarsan, but even this is not always successful as the following case history shows:

Mrs. M. G., 26, married, housewife. Consulted me on Nov. 3, 1917, for sore throat, fever and cough. She had taken sick in July with what had seemed to be tonsillitis. After a few days' illness her fever had disappeared and her throat felt better, but never well. After a couple of weeks she again had fever, which continued up to the time she came under my observation; she had increasing weakness and emaciation, the glands of her neck were swollen, and her throat had become progressively worse, in spite of treatment, and for ten days before I saw her the voice had been hoarse. She never had any previous trouble with her throat, nor any other illness except measles and whooping cough. She was four years married, but had never been pregnant. Her husband was healthy, and syphilis was denied. On examination her temperature was 103°, the glands of the neck were slightly but not markedly swollen, the whole pharynx was covered with a slight membranous exudate, and on the upper pole of the right tonsil there was a small rather superficial ulceration. Physical examination otherwise negative. She was removed to the hospital, where a culture from her throat proved negative to diphtheria bacilli, but smears showed an abundance of Vincent's organisms, a condition which persisted up to the time of her death. Her sputum did not contain Vincent's organisms or tubercle bacilli, but only staphylococci and streptococci. Her urine contained a small amount of albumin at first, with a few hyaline and an occasional granular cast, but later was normal. She had at all times leucocytosis of about 12,000, of the polymorphonuclear variety. Her blood gave a weakly positive Wassermann reaction. Her temperature continuous up to the time of her death, December 8th, was irregular but of the remittent type, and varied from normal to 104°, her pulse rose from 100 to 130 or so, and her respiration rate went to 40, evidently due to weakness, as nothing abnormal was ever found in her chest. Her appetite was poor, and vomiting was a rather marked feature. The throat was at all times extremely sore, and swallowing became very difficult. There was never any delirium. In spite of treatment, the ulceration spread clear across the pharynx, involved the other tonsil, ate away the uvula, involved the soft palate and invaded the larynx, which had previously been the seat of membraneous exudate. She died from exhaustion December 8th, no complications to which death is usually attributed having developed. No autopsy was permitted.

Time forbids that I should detail all the treatment used, but I wish to give the salient facts. Aside from symptomatic and supportive treatment, many local applications were tried, all apparently without the slightest benefit. Among these may be mentioned Dobell's solution, hydrogen peroxide, bichloride of mercury, both 1:100 locally to ulcer and also 1:10000 as throat spray, tincture of iodine, and Fowler's solution. Swallowing became so painful that two per cent. cocain was used locally, and vomiting was so marked a feature of the case that nutritive enemata were given. The pain and general distress were also marked, and called for the use of morphia hypodermically in the later days. On November 16th, .9 grm. of neosalvarsan was given intravenously, the original neosalvarsan being used. This seemed to cause some amelioration of the symptoms, and the membrane on the throat nearly disappeared for a day or two, but in less than a week it was worse than ever. A second dose of the same size Japanese manufacture, given Nov. 24th, had but very slight appreciable effect, while a third dose given on Dec. 3rd was absolutely without any result. During a considerable portion of this time a daily dose of 2 grs. of sodium cacodylate was also given hypodermically, eighteen doses in all being administered.

The case is unusual for (1) its long course, the patient being seriously ill for about four months, (2) a death from exhaustion, no especial complication occurring and (3) its resistance to neosalvarsan, three maximum doses being given a week apart without staying the progress of the disease.

NEUROLOGICAL ASPECT OF BRAIN TUMORS.*

By W. F. SCHALLER, M. D., San Francisco, Cal.

I wish to present to you briefly my personal experiences in 30 cases of brain tumor seen in the past seven years. This material consists of proved cases of tumor either at operation or autopsy. The diagnosis when made has been the result, in most instances, practically all in fact, of the work of many different clinicians. For example, both in clinic and private practice, it has been usual in order to obtain all the possible available data, to obtain the findings of the ophthalmologist, aurist, roentgenologist and serologist, in addition to the usual laboratory work. Only by a proper consideration and evaluation of the data thus obtained is one usually justified in making a definite diagnosis of brain tumor, for it is often by elimination of other possible conditions that a diagnosis of brain tumor is made.

It is not usually difficult to diagnose the presence of a brain tumor, if all the necessary examinations can be obtained. It is, however, extremely difficult at times to localize the tumor. I have been time and time again impressed with the paucity of symptoms pointing to a focal lesion in cases of extensive brain involvement. I shall have occasion to show you examples of this sort with the lantern slides later on. In regard to the nature of the tumor growths there are found in this series a considerable variety, The histologic examinations were made in most instances by Dr. Wm. Ophuls, head of the Pathological Laboratory of the Stanford Medical School. There are found, glioma, gliosarcoma, carcinoma, sarcoma, angiosarcoma, osteosarcoma, fibrosarcoma and tumor hypophysis. I have not met in my series with either a gumma, endothelioma or tubercle. The latter two in larger series are not infrequently found, however. Contrary to the frequency which one would be led to expect from accounts in the textbooks, I am inclined to believe that gummata are of comparatively rare occurrence and when present are usually meningeal in origin.

The general symptomatology of brain tumor is,

* Read before the Eye, Ear, Nose and Throat Section of the Medical Society of the State of California, Del Monte, April 16, 1918, and illustrated by lantern slides.

strictly speaking, not due to the tumor itself, but the symptoms are due to an obstructive hydrocephalus or increased intercranial pressure from a block in the circulation of the cerebrospinal fluid. This block occurs most frequently in the aqueduct. The symptoms of headache, nausea and vomiting, somnolency, mental torpor and even vertigo and nystagmus, are symptoms from the above cause. The local symptoms depend naturally on focal lesions and topical diagnosis. Certain syndromes of which the cerebellar pontine angle tumor syndrome may be pointed out as a type, are quite typical. Mental symptoms, if we accept mental torpor, general memory defects, lack of attention and concentration, are not as a rule present; in other words, true symptoms of psychic abnormalities, such as hallucinations, delusional states, abnormal motor states and marked alteration of the affect or feeling tones, are not found.

The advisability of lumbar puncture is often a question that comes up for discussion in the examination. I am in favor of lumbar puncture, carefully done in practically all cases of brain tumor, because in my opinion it affords the best means of eliminating syphilis of the cerebrospinal axis. It is doubtlessly attended with danger in some cases, and especially so in children. I have one fatal case to record, here reported for the first time. The value of X-ray examinations is unquestioned and this means of investigation I also employ in every case by means of routine stereoscopic skull plates. Alterations in conformation of the skull, either by pressure or direct involvement—even outlines of the tumor itself can be seen in certain cases. Needless to say, however, many tumors of the consistency of the brain itself will not be outlined.

In differential diagnosis syphilis is probably the condition most frequently confused with brain tumor. The fluid tests, appearance of the eye grounds, characteristic nerve deafness, history of the case and general clinic survey should differentiate syphilis in most instances. I believe that by our present method of diagnosis syphilis may be practically excluded. I have felt so strongly on this point that I have not delayed, as has been customary previously, by giving the therapeutic tests of anti-syphilitic treatment, but have advocated immediate treatment, usually operative, as soon as the diagnosis of brain tumor is made. I believe that when vision is threatened, relief of intercranial pressure by prompt decompression is the correct and justifiable procedure. Only too often have I seen delay followed by greatly impaired or total loss of vision. In a number of cases where vision is greatly reduced, the decompression operation is followed by total loss of vision.

Uraemia must be constantly kept in mind as a cause of symptoms which may be practically identical with the general symptoms of brain tumor, viz.: choked discs, nausea and vomiting, headache, vertigo, etc. Our tests for kidney function, in addition to the usual urine examination and examination of the cardio-vascular system, should guide us against error. Serous meningitis, formerly so often mentioned as a separate condition, is, I believe, no other than a condition of internal hydrocephalus, either due to some disturbance in the circulation of the cerebrospinal fluid, or delay in its absorption in the sense of Dandy and Blackfan. It is, therefore, not in any sense a true meningitis. Meningismus due to general infections or toxic causes should not be mistaken for tumor. Tuberculous meningitis and abscess of the brain are other conditions to be constantly kept in mind in the differential diagnosis.

Just a word as to treatment. The only known treatment for brain tumor at present is operative treatment. This may be done for complete or partial removal of the mass, for relief of intercranial pressure by usual means of temporal decompression or by collosal puncture. This latter procedure is one of distinct value and has been of considerable service in a number of cases in our hand. In the cases here reported we have successfully removed five cases of brain tumor either wholly or in part. Unfortunately, however, the very nature of the majority of brain tumors—infiltrating progressive and destructive growths—render by their very nature operative removal impossible. We therefore look forward to the time when the treatment of brain tumors will be a medical rather than a surgical treatment. Before this time comes, however, it will doubtless be necessary for us to know more of the nature and cause of brain tumors, as well as of tumors in general.

ABSCESS OF LIVER IN YOUNG INFANT.*

By A. J. SCOTT, Jr., M. D., Los Angeles.

Abscess of the liver in young infants is not a common occurrence according to our authorities. An abscess caused by the pneumococcus is very rare, and a search through several leading text books and current magazines gives only a few references. They all mention the fact that an abscess of the liver may occur following typhoid fever, appendicitis or invasion by some of the intestinal worms, particularly the round worm.

Therefore the following case which we had a few weeks ago we thought would be of interest, especially as no diagnosis was made antemortem. The route from the lungs to the liver probably was through the blood stream, possibly via the hepatic artery:

J. B., age 13 months, first entered the County Hospital May 9th, 1917, with lobar pneumonia. He re-entered the hospital August 29th, 1917, with a complaint of cough, high fever, poor appetite and history of having been ill since previous entrance in May.

Physical examination. Somewhat jaundiced, which condition kept increasing. Auscultation of chest showed rales along the right side of the spine. Rest negative. Abdomen markedly distended and the liver about three fingers below the costal margin, no adenopathy, reflexes normal and the left leg was somewhat stiffened. Von Pirquet negative, Wassermann negative, urine negative, feces negative for parasites. Blood examination, September 3rd: Reds 2,400,000, whites 41,800. September 15th: Reds 1,600,000, whites 29,400. Differential count polys 52 per cent., monos 48 per cent., normoblasts,

* Read before the Clinical Meeting of the Los Angeles County Medical Association at the County Hospital, October, 1917.

poikilocytosis, polychromatophlia, hemoglobin (Sahli) 22 per cent.: a secondary anemia.

No splenic enlargement. No diagnosis made. Child died September 25th, at 5 p. m. Postmortem held following day by Dr. Hammach showed in chest small firm area in the posterior part of the left upper lobe, cut surface moist, fluid expressed is turbid. Right lung adhesions about the upper lobe and between the upper and middle lobe. All of the posterior part of the upper and middle lobes firm and non-crepitant and have the same appearance on section as the consolidated portions of the left. Abdomen, the organs were all normal with the exception of the liver, which was markedly enlarged and freeing it from the diaphragm showed a pronounced bulging upon the superior surface. Opening this there was a marked outpouring of greenish pus, which upon smear and culture showed a pure culture of pneumococcus.

Diagnosis: Pneumococcic abscess of the liver.

1501 So. Figueroa St.

THE CAUSE AND PREVENTION OF POST-OPERATIVE GAS PAINS.*

By WALTER C. ALVAREZ, M. D., San Francisco.†

So-called gas pains constitute one of the surgeon's bugbears. Some of these pains may be due to cramplike spasms or to inco-ordinated, conflicting waves running over an irritable bowel; others, however, are certainly associated with the accumulation of gas. If an ounce of prevention is worth a pound of cure, it goes without saying that the surgeon, in preparing his patients for operation, should make every effort to preserve and safeguard the mechanism which normally keeps us free from gas and pain. It is my object in this paper (1) briefly to review what knowledge we have of the physiologic processes underlying this mechanism; (2) to point out in what way the results of research differ from the commonly accepted ideas; (3) to make a plea against the routine tinkering with this machinery before operations which are often to decide the issue of life and death, and (4) to review briefly the measures which can be employed before and after the pains appear.

Considerable amounts of gas are formed normally in the bowel from the food. Smaller amounts of air are swallowed (most of it never reaches the stomach, but is belched from the esophagus), and some gases are returned from the blood into the lumen of the gut. Normally, the CO_2, O_2, H_2 and CH_4 are taken up by the blood and excreted through the lungs as fast as they are formed. The amounts excreted in this way by herbivorous animals are surprising; in a steer, 100-150 cubic liters in a day.[1] While studying the intestines of anesthetized animals, with their abdomens opened under salt solution, I have distended closed loops with CO_2 and have seen the gas disappear within five minutes. It has been shown clearly that just as the blood takes up gases from the intestine to be excreted by the lung, so it will also excrete gas back into the lumen of the gut.[2] This process, which normally is insignificant, seems to be enormously increased under certain conditions of circulation and of motility in the gut. The importance of a proper mesenteric blood supply and gas exchange can be seen daily in cases of heart disease, where flatulence is often the first and most trying symptom of failing compensation. The differential diagnosis between the tender liver and flatulence of passive congestion, and the tender liver and flatulence of gall-bladder disease comes up all the time and is always perplexing.

Kader[3] has shown that it makes little difference whether loops that are to be tied off and returned to the abdomen for a few days are washed out with salt solution or filled with fecal material from the adjacent bowel. Very little gas will collect in either case so long as the circulation is good. If the arteries or, more particularly, if the veins are tied, the loops distend enormously and perforate. In man the accumulation of feces above a slowly forming stenosis of the colon is rarely accompanied by tympanites, whereas great distension is likely to follow immediately upon the pinching of a loop of bowel in a hernia or upon the formation of a patch of peritonitis. The conclusion is, then, that surgeons have been striving after a false ideal. They have desired above all things a *clean* and *empty* bowel, whereas they should pray for a good blood supply and a normal gas exchange. Partly on account of this desire for an empty bowel they have starved and purged their patients before operations. In giving purges, they have ignored the well-known fact that these drugs produce severe flatulence and indigestion in many people. Surgeons have told me of cases in which the combination of purgation and etherization alone produced alarming distension and paralytic ileus. They could not help wondering what would have happened if the bowel had had to bear the added insults of drying, handling, cutting and sewing. In other cases, after thorough preparation, the operation was postponed, and the subsequent distress and vomiting had to be ascribed to the purgation.

Thinking that if purgation really has a tonic effect on the bowel, it ought to show itself in the excised segments, Mr. Taylor and I performed a number of experiments on the bowels of purged rabbits.[4] Some 20 animals were used, most of which received laxative doses. They were killed after 24 hours. Those that were well purged were apathetic and sick. The intestinal wall was markedly injected. In some there was an increase in the peritoneal fluid. In practically all of the rabbits the bowels contained gas. Segments of intestine were transferred to warm oxygenated Locke's solution, where, instead of contracting rhythmically for hours, as they normally do, they remained more or less paralyzed. Those that did contract, soon became fatigued.

Now, I have shown that in the normal animal there is a gradation in the irritability and in the quickness of response to a stimulus from the duodenum above to the colon below.[5] As the smooth and uninterrupted progress of food through

---

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

† From the George Williams Hooper Foundation for Medical Research, University of California Medical School, San Francisco.

the bowel must depend largely upon the evenness of this gradation in muscular activity, it is significant that Taylor and I found it much upset in the purged rabbits. Some segments were paralyzed and unresponsive to the strongest stimuli, while others above or below might be overly irritable. One can easily see how such weakened regions could not force their contents out past more powerful and irritable ones.

The excised segments in the purged animals were comparatively insensitive to drugs. Everyone knows how difficult it is to make the "prepared" bowel react after operations. Purge after purge is given sometimes, and all may be retained. If the highly toxic magnesium sulfate is used, enough is absorbed sometimes to kill the patient.

If the purgation has so many contraindications, why do we persist in enforcing it? One man says: to have the bowel empty, as for an enterostomy. That isn't the reason, because he prepares in the same way for the amputation of an arm. Besides, the small bowel empties itself in nine hours and the colon can be cleared perfectly by enemas. Others say the anesthetic requires it, but the specialists in that line do not agree with them. Others fear autointoxication, and purge even when the patient's bowels have moved daily since childhood. Much experimental work shows that they have more reason to fear the absorption of toxins and bacteria from churned liquid feces than from solid lumps lying quietly in the bowel.

After much historical research, I believe the real reason for the practice is the feeling, common to laymen and physicians, that *something* should be done. The practice can easily be traced back to Hippocratic medicine, with its humoral pathology. When a Greek physician amputated a breast, he prepared by purging just as we do to-day. Why? Because he believed that the cancer was due to an accumulation of "black bile" in the breast; and that it had to be purged away before there could be any hope of a permanent cure. Some may smile at this idea, forgetting that these humoral explanations for disease were current until fifty years ago, when the writings of Virchow, Pasteur, Lister and others began to force them into the background. It is a law of human nature that practices always persist long after the primary motive is forgotten.

Fortunately, every year now sees a lessening in the severity of preparation. When I was a student, the patients received two or three compound cathartic pills, or ten grains of calomel with ten grains of jalap. To-day it is a moderate dose of castor oil or salts, sometimes given 48 hours before, "so that the patient can recover a bit." Many surgeons have given up all purgation and are enthusiastic about their results. Many of them stopped purging because their nurses kept asking why it is that emergency appendicitis cases ("unexploded") have such quiet post-operative courses as compared with the well-prepared interval ones. During the last five years I have seen a considerable number of people operated upon (all laparotomies) without preliminary purgation, and the results have been very satisfactory. Often, about the fourth day, there has been some gas, but never anything alarming. We can hardly expect to do away with post-operative pain entirely in abdominal operations, because the wounds in the bowel or in adjacent organs must remain as sources of irritation and reverse peristalsis until they are healed.

Time and again I have had surgeons say, after they had admitted that preparation was needless and often harmful, "Well, we have cut it down now so it doesn't do much harm." I maintain that this is not logical. If a practice which originated in humoral pathology cannot find new support in modern physiology and experimental medicine, it must be *abandoned,* not mitigated. I would clean the bowel by enemas only in those cases with definite stagnation, or in which either the colon or the pelvic organs are to be operated upon.

What else should we do to avoid gas pains? Above all, handle tissues gently. Avoid peritoneal drying. Whenever possible, use gas and oxygen as the anesthetic, because it has much less effect on the digestive tract than has ether. Give food and water as late as possible before operations, and as early as possible afterwards. No physiologist would ever expect to demonstrate peristalsis to his students with a starved animal. Food raises the tone of the muscle and best restores the downward currents when they have been upset in any way. We demand an active bowel after operation and do everything which a physiologist could suggest to get a paralyzed one. Smooth muscle must be stretched before it will work well.

I believe the Murphy drip is often started when there are no indications for its use. There is considerable evidence that it can keep up the patient's distress, and I believe it would often be much better to give the water ad libitum by mouth. What if it is vomited? It will wash the stomach and often stops the vomiting. Everyone knows that there is less strain on the abdomen when there is something to vomit than when the retching is dry.

Avoid the routine post-operative purge. So often the convalescence is uneventful until that dose comes to demand feces which are not there. When a surgeon operates for hemorrhoids he is delighted when the bowels do not move for a week, when he does a gastroenterostomy he thinks it a tragedy if they do not move by the fourth day.

Enemas and colonic tubes often fail to bring relief because the trouble is in the small bowel. Eserin, pilocarpin and pituitrin often fail to move the gas. I believe this is due to the fact that they seem to cause a generalized spasm of the bowel without the forwarding tendency that is observed with laxatives. One can compare it to a beginner's efforts at milking a cow: he squeezes the teat violently as a whole; what is needed is a coordinated contraction spreading from the base to the tip. For this reason I believe more experiments should be carried out with some of the

hypodermic laxatives which could be used post-operatively when the stomach is upset.

Those who are interested in the subject should consult the excellent thesis deposited in Lane Library by Doctor Howard West. He notes that *eserine* is highly toxic and unreliable. Pankow,[6] after using it on 210 operative cases, concluded that the results were no better than those obtained in a similar untreated series. Encouraging results have been obtained with *apocodein*[7] in a number of cases studied by Doctors Terry and Hoag. The dose is about gr. 1/5.* *Phenoltetra-chlorphthalein* is probably a little too slow for emergency use, but it might perhaps be given at the first sign of trouble.[8] The dose is gm. 0.4 dissolved in 20 cc. of olive oil. A number of men have found *sennatin* useful postoperatively. I have not been able to get any on account of the war. *Peristaltin* is a new preparation of cascara. I could not produce any effect with it on excised intestinal segments. This agrees with the work of others who found it comparatively inert. *Hormonal* has caused so many deaths that its use is unjustifiable. In my experiments, it had no effect on excised segments of bowel. *Pituitrin* has been used probably more than any other drug, and many claim that it works miracles. It is best given intramuscularly as the intravenous injection produces alarming symptoms in many people. As I have said before, its action is uncertain; it often produces vomiting, and animal experiments show that it may sometimes depress the bowel. I believe it is better to try pituitrin in serious cases than to begin filling the patient's stomach with strong purgatives. I do not believe, as many do, that unless we combat intestinal stasis early and actively, the patient will die with paralytic ileus and peritonitis. Paralytic ileus is not the cause of peritonitis; it is the result of that disease; and active peristalsis, if still attainable, is more likely to spread the infection than to cure it. Heroic treatment with purgatives may turn the scales against the man who would have lived if left alone.

From the standpoint of the pharmacologist, there is no sense in adding purgatives to enemas. Castor oil owes its effects to a soap formed in the duodenum by the alkaline pancreatic juice. Magnesium sulfate probably adds very little to the effect of an enema, and when retained, it has been known to produce coma and death. The commonly used milk and molasses enema probably owes its efficacy purely to the irritant sugars and acids in the molasses.

To sum up: Gas pains are better prevented than cured. A normal mesenteric circulation is more to be desired than an empty bowel. It is known clinically and now shown experimentally, that purgation upsets the mechanism in the bowel which protects us from gas and pain. There is no valid excuse for pre-operative purgation. It is a relic of humoral pathology. The post-operative results without "preparation" are excellent. Give food as late before and as early after operation as possible. Avoid heroic measures post-operatively.

* At present the drug can be obtained only from Lengfeld's Pharmacy, 272 Post Street, San Francisco.

Discussion.

Dr. F. M. Pottenger, Los Angeles: It is most unfortunate that so many papers dealing with practical physiological points have to be published in special journals which are not read by clinicians. Hence it is that scientific observations of great practical value are often very slow to influence the practice of medicine. The work of Dr. Alvarez is in line with the best that is being done by the younger school of physiologists: men like Cannon, Goetsch, Hoskins, and Carlson. Their work is of immediate and practical value and should be watched carefully by those of us who study disease in the clinic and in the operating room.

Dr. Shoemaker, Los Angeles: I wish heartily to endorse the various technical improvements advocated by Dr. Alvarez in his excellent paper. I wish particularly to call attention to the fact that in every case that I have seen where the patient had taken large doses of purgatives the peritoneal cavity contained an unusual amount of fluid. These patients had been kept awake all night by painful peristalsis. Patients that are given a purgative within twenty-four hours of an abdominal operation have their bowels more or less paralyzed afterwards, and this paralysis is often associated with gas pains and distension. When we do not purge we seldom have distension, painful peristalsis, paralytic ileus, reverse peristalsis and vomiting. I am satisfied that the colon can be emptied satisfactorily by enemas alone. Practically every injection into the anal canal is a high injection. It can easily reach the ileocecal region, as every roentgenologist knows.

I agree heartily with Dr. Alvarez's views because I consider rest most essential in the hours just prior to an operation. The last bit of preparatory technic should take place no later than the night before the operation and in the morning absolute rest and quiet should prevail in the patient's room. The shaving and the giving of enemas should be done before; no friends should visit and no nurses should disturb the patient.

Dr. Witherbee, Los Angeles: Although much impressed by the reasonableness of most of what Dr. Alvarez has said, I still feel that we should be careful to have the intestine empty before operations. I feel sure that if we were to operate on a man whose stomach and intestine were full of food, and on another whose tract was empty, we would have more postoperative trouble with the first one than with the second.

Dr. Crosby, Fruitvale: I feel very strongly that most of us would be inclined to follow Dr. Alvarez's suggestions if we all had had personal experiences with the surgeon's knife. There is nothing like having one's own appendix out to make one look for ways and means of lessening the post-operative torments. After such an experience we have no sympathy with pre- and postoperative meddlesomeness, and we let our patients have water more freely than we ever did before.

Dr. Emge, San Francisco: Since Dr. Alvarez called my attention to these things many months ago, I have studied carefully one hundred consecutive gynecological cases operated upon in the Stanford Hospital. The first fifty were given an ounce of castor oil the night before the operation; the second fifty had only an enema. Fifty-two per cent. of the women in the first purged group had gas pains, while only six per cent. in the second group had such trouble. At operation, the unpurged bowel was more nearly empty than the purged, and much less troublesome to pack off.

H. D'Arcy Power: There is a medical as well as a surgical side to the topic discussed this after-

noon. No cases are commoner, either in general practice or in the hospital ward, than those in which the symptoms of gas accumulation are the prominent feature; they trouble us and bother us the whole time.

I have long come to the conclusion that in the flatulent constipated cases the use of powerful purgatives or even mild aperients does not give relief from the gas; but on the contrary, the only way to treat these cases is to induce a condition of rest and comfort in the mucosa of the bowel. The use of food leaving a residue that is not irritative to the colon is more valuable than the use of coarse food.

Lately I think I have success with a combination of dry pituitary gland, camphor and asafoetida, to which atropine is sometimes added.

Dr. Alvarez, San Francisco: In answer to Dr. Witherbee, I will say again that in order to have food in the stomach and small intestine one would have to operate within a few hours after a meal. In 95 out of 100 people the small bowel will of itself be perfectly empty in the morning, twelve hours after the last meal. The colon is the only part of the tract in which food can stagnate; it is only about a yard long and can easily be cleaned by enemas. Someone has asked how these new ideas of mine about peristalsis are to be reconciled to the older views of Cannon about rhythmic segmentation, etc. In answer, I will say that I do not see that my work conflicts with or detracts from the value of the work done by my honored teachers in this field; the discovery of these gradients simply advances our knowledge a step further, and gives us plausible explanations for many phenomena of health and disease—phenomena which have hitherto been supposed to be "reflex," whatever that means.

References.

1. Zuntz: Deutsch. m. Wchnschr., 1884, x, 717; Boycott and Damant: Jour. Physiol., 1907-08, xxxvi, 282; Boycott: Jour. Physiol., 1905, xxxii, 343.
2. Schierbeck: Skand. Arch. f. Physiol., 1893-1894, v, 1; Woodyatt and Graham: Trans. Clin. Path. Soc. Chicago, 1912, viii, 354.
3. Kader: Deutsch. Ztschr. f. Chir., 1891, xxxiii, 57-272.
4. Alvarez and Taylor: Journ. Pharmacol. and Exper. Therap., 1917, x, 365.
5. Alvarez: Journ. A. M. A., 1915, lxv, 388; 1917, lxix, 2018.
6. Pankow: Zentralbl. f. Gynak., 1904, xxviii, 937.
7. Alvarez: Calif. State Med. Journal, 1916, xiv, 363.
8. Rowntree: Jour. A. M. A., 1910, liv, 344.

Forty-Seventh Annual Meeting of the Medical Society, State of California

Del Monte, April 1918

THE PAST PRESIDENT.

Dr. J. Henry Barbat is of French descent and was born in San Francisco, September 10th, 1862. He received his early education in that city, graduating from the Boys' High School in the year 1879. A year later he graduated from the California College of Pharmacy. For a short time he followed the profession of pharmacy, but perceiving the advantages of a larger field of activity, he entered upon the study of medicine and obtained his degree of Doctor from the Medical Department of the University of California in the year 1888.

His early practice was in the "Mission," San Francisco, where he built up an enormous clientele.

Being ingenious and dextrous, he naturally turned to surgery, where he has assumed a most distinguished position. For many years he was a teacher of anatomy and surgery in the Medical Department of the University of California. As a lecturer he was inspiring and had a fine capacity for imparting knowledge.

In his many travels to the great clinics of the world, he developed many lasting friendships among those eminent in our profession. Among these was the late John B. Murphy, who for many years was a close personal friend.

Dr. Barbat was one of the first on the Coast to conduct scientific animal experimentation. Starting with the early use of the Murphy button he advanced to the more complicated and exact operations of abdominal surgery, until he became a past master in technique. His facile and rapid operating was wonderful to see. In plastic surgery his skill amounts to a fine art.

In the West he has been a leader in the evolution of modern asepsis. He is a Fellow of the A. M. A., a Founder of the American College of Surgeons, a member of the Academy of Medicine and the American Therapeutic Society.

In the year 1899 he served in the Board of Health, and later was a member of the Board of Medical Examiners. He was President of the San Francisco County Medical Society for 1907, and President of the State Medical Society in 1917, and is at present one of the Medical Advisory Board of the State of California.

In all this we see a man of tremendous energy and indefatigable service. His skill, industry and willingness to help are the dominant features of a splendid career. Dr. Barbat is still a young man of 56 years, so that philosophy and experience rest upon his active life with becoming grace, and fit him for long years of useful work.

J. H. BARBAT, M. D.

Minutes of the House of Delegates

FORTY-SEVENTH ANNUAL SESSION OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

FIRST SESSION

Held at Hotel Del Monte, Tuesday Evening, April 16, 1918, 8:30 o'clock.

ROLL CALL.

The roll being called, sixty-nine (69) Delegates were found to be present. The President, J. Henry Barbat, in the chair, declared that a quorum of Delegates was present and that the House was ready for business.

The President then made the following address:

To the members of the Medical Society of the State of California:

When I assumed the office of President of your Society last year, I asked for the active co-operation of the members in assisting our country to defend the democracy of the world. You have responded nobly and a number of our members are already on the battle front, and I have every reason to feel that we will be proud of their achievements before the war is over. But, we have only just begun, and the sacrifices which we have made are nothing to those which we must face during the coming year, and I again call upon you to be ready to make any and all sacrifices which may be necessary to help our Country win this war.

I am supposed to speak on some subject germane to our profession, and I feel that I can not do better than to mention a few of the advances which this war has forced upon the medical and surgical world. While nothing startling has been discovered, the vast number of sick and wounded which were crowded upon the members of our profession made it imperative to devise new methods of handling and treating the sick and wounded. The greatest advance which has been made in medicine and surgery, is the standardization of the methods of treatment of the best men in the world.

The first serious problem which confronted the surgeon was the large number of cases of gas gangrene, which resisted every method of treatment except by extensive resection of all tissues involved. The latest work has demonstrated that a number of different bacteria are found as the causative factor in this infection, and polyvalent vaccines have been successfully used to inhibit the development of this destructive disease. We will probably soon hear that all men who are sent to the trenches have been vaccinated against gas gangrene, and another triumph scored for our profession.

Much to the surprise and chagrin of the surgical world, it was found that practically all open wounds were infected in spite of the first aid dressings, and instead of having many clean gunshot wounds to deal with, it was found necessary to use various antiseptics to combat numerous infections. The usual antiseptics, which were considered satisfactory under ordinary conditions, failed for one reason or another, and something better had to be found. Dakin brought forth his hypochlorite solution, and with Carrel's ingenuity it has been the means of saving many thousands of lives and limbs, not only in the war zone but all over the world. Not satisfied with this method which was time consuming and required extremely perfect technic, Dakin discovered another and more powerful antiseptic, the dichloramine-T which is easy of application and practically painless.

With the introduction by the Germans of liquid fire as a means of human torture and destruction, the allies were obliged to devise methods which would enable them to treat and dress large numbers of burns with less pain and in less time than heretofore. Various parafin compounds were invented which fulfilled all expectations. Patients no longer dread the frightful suffering caused by dressings under the old methods of treatment. Plain parafin has superseded all the compounds and has been found equally good.

An important advance has been made in the localization and removal of foreign bodies, by Obredanne and Ledoux-Lebard of Paris, who by their method of intermittent control and a roentgen tube with a double anticathode have been able to localize and remove foreign bodies in a manner hitherto impossible. The double anticathode produces 2 shadows of the foreign body. The distance between the shadows is directly proportional to the distance between the foreign body and the screen. The small box screen is worn by the operator and can be readily moved back and forth. The surgeon places the tip of a long metal pointer on the skin directly over the site of the foreign body and can tell very quickly the approximate depth at which it is located. Pushing back the screen he makes the initial incision, replaces the screen and again adjusts the pointer. When the

distance between the pointer and the foreign body coincide, the exact location has been found.

The vast number of head injuries has developed a definite mode of procedure, with the result that a large percentage of cases are saved which would have undoubtedly died under the older methods. All head injuries involving the skull are operated upon as soon as possible and all damaged tissue removed. The skull is opened if the slightest suspicion exists that there is any intracranial lesion, even if there is no evidence of fracture of the outer table. This principle could be followed with advantage in civil practice.

Shell shock, which at first it was feared would leave us a large number of permanently disabled neurotics, is now being treated by keeping the patients near the front lines, in order that they may still hear the sound of artillery, and the proportion of cures has been largely increased by this method of treatment. The so-called trench diseases are being extensively investigated at present and much light has been thrown on their etiology by the finding of small protozoa in the blood serum, the liver, spleen and lung in a number of cases of trench fever.

The cycle of development was studied on the blood and cells from various organs while the liver appeared to be the main habitat. The treatment so far has been based on the action of dyes on the protozoa observed on a warm stage and good results have been obtained clinically by the use of trypaflavines.

The carrier of the hemogregarina has not yet been found, but studies are being made of the stomach cells of the many varieties of lice found on the soldiers.

I desire to call the attention of the Society to a few changes which I deem necessary to avoid friction, and facilitate the running of the Society during the interim between the annual meetings. The President discovers that according to the present by-laws he is the presiding officer only during the annual session, and during the year is merely allowed to attend the meetings of the council. I would respectfully suggest that the President of this Society should also be chairman of the council. I would also suggest that the committee on publication should be elected the same as all of the other standing committees, and that it be given authority to determine the policy of the JOURNAL, and have full charge of all papers and editorials published in the JOURNAL.

At the next session of the legislature, bills relating to the establishment of social insurance will be presented, and it is the duty of every one of you to study this important question in order to direct your Senators and Assemblymen to take proper action in this matter. As far as can be ascertained, social insurance is coming, and a bill of some kind will be passed by the legislature, and will undoubtedly be signed by the governor; it therefore becomes the duty of the profession of this State to see that the bill which does pass, is for the best interest of the workingmen and also for the best interest of our medical men. We can not dodge the issue and therefore should face it that it may redound to our credit. Every candidate for the legislature should be educated on this subject by the profession, and I ask each member of this Society to constitute himself a committee of one to call upon the candidates in his district and impress them with the importance of thoroughly studying the question of social insurance before voting for or against the bills which will be presented. Get in touch with your Senator and Assemblyman, and you will find that he is very willing to be instructed in any matter which involves the welfare of the community.

APPOINTMENT OF THE REFERENCE COMMITTEE BY THE PRESIDENT.

The President then appointed the following Reference Committee: F. B. Carpenter, San Francisco; Fitch C. E. Mattison, Pasadena; Langley Porter, San Francisco.

REPORT OF THE COUNCIL.

The President then called upon the Chairman, C. G. Kenyon, who read the following report of the Council:

Mr. President, and the Honorable House of Delegates:

Gentlemen:

I beg to report, the Council has passed the Century mile post; the last being the 102nd meeting since its organization, and the beginning of its work.

I wish to give expression to the high appreciation of the service of the members of this body, which has met as above stated over 100 times to consider, discuss and act upon questions germane to the welfare of The Medical Society of The State of California.

This House of Delegates is present for three days, with the pleasant association, of the large number of members from all parts of this great State. The Councilors, from the different Districts assemble several times, at a sacrifice of time and traveling expenses, having under discussion matters of great importance, always, I am pleased to say with good humor and proper deliberation. Discord has never been a feature of its work.

The Units—Register, Journal, Information Bureau, Defense Fund, and Indemnity Fund—have been increased by the Publicity Committee for which provision was made at the last session of this House of Delegates. It has been organized and has performed important work, as will be shown by the reports of this House.

I wish to call the attention of the members to the value of the Information Bureau. The archives of this unit, can and should be kept in mind by every member of the Society, who desires any information concerning any medical man within our jurisdiction.

During the last year past our Council has held seven meetings, all of which have been well attended. It has taken up during that time several rather important problems.

Its first duty after the last State Meeting was to deal with the report of the Reference Com-

mittee and the many recommendations furnished therein. These have been taken up one by one and dealt with according to each requirement and they have been the basis of a number of new activities in the Society. Prominent among these have been the establishment of the Indemnity Defense Fund and the appointment of its Trustees; and the Society is fortunate in having as its representatives in this important position three (3) men such as Dr. Lemuel P. Adams, Dr. Wm. E. Briggs and Dr. A. S. Lobingier. The money of this Fund has been deposited in three of our strongest banks in San Francisco: The Union Trust Company of San Francisco, Savings Union Bank and Trust Company, and the Bank of Italy. The money on hand in that Fund is still intact, and there are no judgments against it. It forms the nucleus for a very strong and useful feature of our organization, and is something in which the Society should take a very active interest and which it is to their advantage to support. Our General Attorney, Mr. Hartley F. Peart, will deal more explicitly with the problems of this Fund. Members should feel that the Council recommends hearty co-operation in this matter.

Publicity Bureau.

Another feature of the work laid out for the Council was the organization of the Publicity Bureau. This department has assumed a definite shape and is at present in working order within the Society. The members should recollect that this department of the Society was established to take up several definite lines of work. These are mainly to promote organization, to represent the Society in the eyes of the public, and to deal with matters of policy and legislation.

It will also provide in emergencies, an Advisory Unit, which the Secretary or the Editor can consult on questions of policy or procedure.

To carry out some of the proposed ideas of the Publicity Bureau it will be necessary to make radical changes in the Constitution and By-Laws; and it is through the activities of this department that we present to you, at the State Meeting, these proposed changes, with the recommendation that they be adopted.

The Council also asks that any subject which will in any way affect and benefit its members be sent to the Publicity Bureau through the Secretary for consideration. Suggestions of any kind are gladly accepted.

The necessity for assessments to maintain the running of the State Society, in spite of the crippling effect of the loss of membership on account of the war; also to deal with the humane side of this question. The Council feels very deeply the seriousness of the dilemma in which the medical officer finds himself in the service of his Country. His diminishing income on the one side, his increasing expenses on the other, demand every effort on our part to render assistance. It is the purpose of the Council working through the Publicity Bureau not only to protect the interests of these men who have gone to the front, but to relieve them of all the burden possible in their obligations toward the State Society. It undoubtedly will take up the problem for the care of the affairs of its members very much more fully than it has in the past.

National Defense.

The State Organization for National Defense has been active in a quiet way throughout the year. Its membership comprises nearly twenty (20) of our most representative men and women. The Committee has kept in intimate touch with Washington through all phases of the war; assisted in organization and development of working units. It has helped in the appointment of the members on the Medical Advisory Boards and in furthering propaganda and in dictating national legislation.

Legal Department.

This department, in charge of the General Attorney, Mr. Hartley F. Peart, and the Assistant General Attorney, Mr. Hubert T. Morrow, filed with the Council at its last meeting a complete report of its activities for the year.

This report shows that a great many claims have been disposed of without loss and that over a score of cases have been terminated in the courts in favor of different members. Throughout the year not a single judgment was obtained against a member.

The Indemnity Defense Fund is increasing slowly in subscribers, and no settlements or judgments were paid therefrom in 1917.

Amendments to Constitution and By-Laws.

The Council will submit to you a number of proposed amendments in our constitution and by-laws. The constitution and by-laws have sadly needed such changes, particularly the by-laws. The amendments proposed will harmonize the various provisions and will do away with a number of sections long since obsolete. Some of these changes will greatly facilitate the work of the Secretary's office and remove possible grounds of confusion and conflict.

According to the understanding of last year, the Society has discontinued publication of the Official Register and in its place will print a similar list of its members in the form of a roster. In addition to our membership list it will also contain items of interest and help to the physician. It will be issued as a supplement to the Journal and will be published as soon after the State Meeting as possible.

The Journal.

The Journal which you have all received regularly is a credit to the State Society, its Editor and Publication Committee. It undoubtedly is the best State Journal published in America, has the highest type of scientific work as well as the cleanest advertising. It has increased in volume and circulation, and in spite of the increased cost of production it has not been a loss to the Society.

REPORT OF THE AUDITING COMMITTEE.

The President then called upon H. A. L. Ryfkogel, Chairman of the Auditing Committee.

Dr. Ryfkogel made a verbal report, stating that the finances of the Society were in a much more satisfactory condition than at this time last year; that the indebtedness had been greatly reduced, and the expenses of running the Society materially lessened.

REPORT OF THE SECRETARY.

The President then called upon the Secretary, Saxton Pope, who made the following report:

The Secretary reported that notwithstanding the loss of membership throughout the State, from military enrollments, our roster of names was over 2300. During the year more than 600 of our men had joined the colors, which gives a high percentage of our best physicians in service. In spite of this loss the Society was progressing and saving money.

The work of the new Publicity Bureau, created by the House of Delegates last year, was beginning to show results. It was preparing to take an active and effective part in legislative work in the State, safeguarding the interests of the profession. Through its efforts a complete revision of the Con-

stitution and By-Laws of the Medical Society has been made, and through the Council recommendation these are to be presented to the House of Delegates for their consideration. The proposed changes have as their object the adjustment of our governing laws to our present needs. Circumstances and changing times demand improved measures, and the Bureau hopes to promote more harmony and effective co-operation between the departments of the Society by these amendments.

The question of a permanent Secretary was still unsettled, but the Council was making a persistent effort to find the right man to fill the place of the late Dr. Philip Mills Jones. It hopes ultimately to secure a full-time Secretary and Editor who can devote all his energy to organization work, public policy and constructive propaganda.

REPORTS FROM COMMITTEES.

The President then referred the reports, which had been read at the general meeting, to the Reference Committee. Reports from the following Committees:

Scientific Work, Harry E. Alderson. (Original article read at General Meeting.)
Public Health, Robert T. Legge.
Advertising, R. E. Bering.
Industrial Accident Insurance, C. P. Thomas.
Social Health Insurance, René Bine.

REPORT OF COMMITTEE ON PUBLIC HEALTH.

Mr. President and Members of the California State Medical Society:

The office of Chairman of the Public Health Committee was tendered me recently, vice Dr. G. E. Ebright, resigned. It was my ambition to develop a section in Public Health in this Society and to offer a program on some of the important problems relating to preventive medicine. On account of my being for an unexpired term and not being able to meet my confreres on the Committee, I could not perfect plans for this meeting. During these trying days of military strife when our national endeavor is to be victorious for the principles which persuaded us to enter the colossal world war, it behooves every American, and particularly the men of our profession, to lend every available means and effort to accomplish this end. We are making sacrifices. Our psychology of yesterday is different from that of today, which is the spirit of Democracy. Who has yet come forward to interpret in its larger sense its clear definition, and what will its ultimatum be tomorrow? It is, therefore, timely that this Society be placed on record as engaging all our resources, our energies, and our influences in supporting our Government through its numerous agencies in developing many of the big problems in Public Health, which are so vitally important in war time.

Probably the first important measure that confronts the Public Health authorities of the United States today is the control of venereal diseases. Our California State Board of Health, under the untiring efforts of Major Wilbur Sawyer, launched and conducted a wise public campaign to attack this problem forcefully, organizing the prevention of syphilis and gonococcus infection, and making these diseases reportable and quarantinable, as well as offering means for diagnosis and cure. Surgeon General Rupert Blue, of the U. S. P. H. Service, in co-operation with the U. S. Army, and the Red Cross, is actively endeavoring to carry out successfully a plan to control venereal diseases, and has suggested in a memorandum, its epidemiology, morbidity, quarantine, and cure of infected persons, as well as a thorough education of the general public to the end that this disease group will be considered in the same light as are the communicable infections. We cannot be too drastic in dealing with this problem, after the startling facts that were unearthed during the first draft of our National Army. Manifestly no plan at the present time is as complete as that of Western Australia, for that country has provisions regulating both the patient and his physician. As a profession we were trained in curative medicine, let us now do our "bit" and make our great effort to control what was one time styled "private diseases," by using every available measure to suppress a greater evil than tuberculosis. The time for argument has passed and action is immediately and absolutely necessary. There is no doubt that alcohol is one of the greatest factors in the question of venereal diseases, and consequently as a Public Health measure its day is doomed likewise. Ex-President of the A. M. A., Charles Mayo, in his presidential address, advocated abolishing its place in medicine. We as physicians know the pathological results of alcohol, as well as the effect it has on the moral sense of our people, and should now go on record to support the National Amendment for Prohibition.

The suppression of prostitution can be minimized by the State providing industrial centers or work farms for these women, since it has been proven that the larger percentage of this class are feeble-minded. From an economic standpoint, it will be cheaper than convicting and confining them in jails or hospitals to be liberated later to follow their trade as before. A bill making provisions to care for such women should be presented at our next Legislature as a war measure to suppress prostitution and its evil results in venereal diseases.

In making over deductions from the U. S. Report of Vital Statistics for the registered area in 1913, we find that two groups of diseases, viz., tuberculosis has a toll of 34% and certain children's diseases, such as diarrhoea, whooping cough, bronchopneumonia, scarlet fever, and diphtheria, aggregate 50%. We are furnished with a significant argument that our present health system has materially failed in reducing mortality. The solution and remedy for this state is not to be found in simply making laws, but in putting them into execution. This can only be accomplished by employing full time trained health officers coupled with a social service bureau supporting health visitors, who could strike to the core and cut down this gross 84% of a preventable mortality to a minimum. This is not a dream or an experiment, but an executable reality. It is a necessity and such an important one that the General Medical Board of the Council of National Defense recently held a conference in Washington to consider and report on child welfare work. After the discussion there were urged and recommended eighteen resolutions which were adopted. This body, through its State Councils, desire to co-operate with all organizations interested in maternal, infant, and child welfare, to secure information as to the specific needs of each community and to show how such needs can adequately be met. Your Committee recommends to the Society that we encourage the employment of full time, well trained health officers as well as trained health visitors to follow up this problem, that the mastery of communicable diseases will be accomplished. And furthermore, that resolutions adopted by the General Medical Board of the National Council of Defense on Child Welfare in war time be supported.

The Committee offer for your consideration these few urgent Public Health problems which during the nation's crisis this Society should go on record by approving as a resolution.

ROBERT T. LEGGE,
Chairman, Public Health Committee.

REPORT OF COMMITTEE ON ADVERTISING

Your Committee beg to report that the advertising of the Journal is in a very satisfactory condition, and would have been materially increased except for the abnormal conditions existing. We have lost some advertisers, but on the other hand have gained many new ones.

There is no journal of its class published by any State Society with advertising rates as low as ours, in consequence of which we have increased our rates materially and which have been accepted by advertisers.

We have employed an outside solicitor, who has rendered good service.

Your Committee would urgently ask the cooperation of the members of the Society, which if given will substantially further the interests of the Journal.

REPORT OF COMMITTEE ON INDUSTRIAL ACCIDENT INSURANCE.

Your Committee after another year's consideration begs to report as follows:

The three subjects which this Committee was asked to consider were the possible increase in fee schedule, the free choice of physicians by the injured, and the medical ethics involved in Industrial Accident Work.

Your Committee believes that the present minimum fee schedule as usually interpreted is not satisfactory to skilled surgeons, the class of men desired by the Commission, especially as usually interpreted by the Medical Director of the Fund and the adjusters of the Insurance Companies.

We wish again to call your attention to the fact that members have two resources for adjustment of bills which are in controversy, with the Insurance Companies; first with the Adjustment Committee of the California State Medical Society, and second, through the Medical Director of the State Fund; the Commission being the final court of appeal in all such matters.

The second matter which we were asked to investigate, was relative to the choice of physicians. This has not improved at all during the past year; in fact it is in worse condition than during last year. The Insurance Companies and the Fund have both broken every agreement pertaining to this matter, which was made originally with this Society. The Insurance Companies are now employing men on salaries or some such arrangement, to do their work throughout the State. The Fund is appointing a few men to do its work. The law which permits an employee to demand a change of physicians from his employer, by which the latter will nominate at least three additional physicians for the particular case, allowing him to select from them, has, so far as your Committee knows, been resorted to but very seldom.

Third, the matter of medical ethics; your Committee is informed and believes that a considerable part of the profession has disregarded the recognized deep-rooted antagonism which exists against contract work. As above stated, many of our members are taking this work either on a straight salary, which is below fee schedule, or they are receiving special fees below schedule. Your Committee discountenances the practices of these physicians, and the action of the several Insurance Companies, and feels that it cannot do better than to reiterate the full resolutions which were presented last year by the Reference Committee on this subject and adopted by the Society, and are now a matter of record.

We wish also in face of the above facts relative to the abuses which are entering into this work to offer our earnest protest against the present impending bill on Social Health Insurance.

Dr. Lambert Changes Front.

As showing the change in attitude as to health insurance we wish to refer to a letter written by Dr. Alexander Lambert, Chairman of the Social Insurance Committee of the American Medical Association, as follows:

The whole situation is this: You have an insurance company that is trying to go in as a middleman between the patient and the doctor. All previous experience shows that when once firmly established, so that it can control the practice among the patients by giving them lower rates for medical service, the middleman in the end can dictate terms to the doctors and bid them down to absolutely inadequate remuneration for what they do. At first it looks very tempting to be assured of good, big fees for possible operations, which by their very nature, relatively seldom occur and which are only done by few surgeons, but the main work is among the patients with the small fees. Of course, when many are seen and one gets 100 per cent. collections, as would be done by the company paying it, it increases the income to the doctor because of the proverbial lack of collections that ordinarily physicians make.

I think there is one pernicious factor in this scheme, and that is that the patients pay a carrying fee of $1.60 and 40 cents, and yet the same service is given for the varying amount of returns. That, I think, you will find to be a vicious system. There is no question as to the possible value of this scheme. There is no question that the doctor getting 50 per cent. and the insurance company taking 50 per cent. for expenses and profit, makes a mighty good thing out of it, especially since it takes only very selected groups of lives. It takes the healthiest group of people in the community and offers them medical treatment. It practically becomes a variation of lodge practice among selected lives and under capitation system. It has all the possibilities of the evils under this system. If there are a great many patients under one doctor's care, and a good deal of sickness, even in these selected lives, the doctor must give a hurried service and an inadequate service, even for these small fees. It comes right down to the evils for which lodge practice is held in contempt—that of inadequate remuneration for poor medical service.

As far as the health insurance scheme is concerned, it is perfectly inadequate. You cannot choose the healthiest lives in a community and give them selected service on small pay and think you are doing anything for the community in the way of health insurance, because a health insurance scheme must take in all lives, good and bad, the very sick as well as the very healthy, and must give good service to all. This scheme which you have sent me successfully avoids any medical service except to the unusually healthy.

There is the danger in all these schemes of debauching a community in its ideas of medical service when done on a commercial basis such as this. It gives the idea to people that they can get medical service for almost nothing, and in the end it comes down to the doctor under lay control that deliberately makes the physicians bid against each other and produces all the evils of capitation system or lodge practice. It is the beginning of the condition against which the physicians in England fought so bitterly and complained of so bitterly just before their insurance act was enacted. The insurance companies make anywhere from 17 per cent. to 35 per cent. out of what they collect, and any middleman will gladly undertake the job to sit still and do that, letting the doctor do the work.

Yours sincerely,

ALEXANDER LAMBERT.

Committee on Social or Health Insurance of the Chicago Medical Society: Edward H. Ochsner, C.

B. King, George Apfelbach, Wm. O. Krohn, S. V. Balderston, J. V. Fowler, A. W. Seidel, J. R. Ballinger, secretary; Chas. J. Whalen, chairman.

Approved by the Illinois State Medical Society.

Committee on Social or Health Insurance of the Illinois State Medical Society: Edward Ochsner, George Apfelbach, C. A. Hercules, S. V. Balderston, J. R. Ballinger, E. W. Fiegenbaum, W. B. Chapman, secretary; Chas. J. Whalen, chairman.

"The medical profession, both in Germany and England, has been demoralized, and a large amount of time which should be given to the consideration of proper medical questions and problems is now being devoted to interminable disputes as to rights and privileges, and duties and penalties, under the insurance acts Week after week the British Medical Journal gives publicity to the facts of confusion and conflict of professional interests in British medical practice. There has not been any real health progress in England during the last three years, or since the National Health Insurance Act came into operation, nor has there been a measurable degree of intelligent co-operation with the national or local health administration. The marvelous sanitary progress of England during the last thirty years was secured without compulsory health insurance, just as this has been the case in the United States, Canada and Australia.

"The main object of compulsory health insurance is to establish an enormous bureaucratic machinery and bring about a further regularization, supervision and control of wage-workers and their dependents."—Dr. Frederick L. Hoffman.

C. P. THOMAS, Chairman.

REPORT OF THE COMMITTEE ON HEALTH INSURANCE.*

Mr. President and Fellow Members:

Your Committee's first report was published in full in the June, 1917, issue of the California State Journal of Medicine. In this report we summarized the arguments for and against the health insurance bills that have been proposed in this country. We felt that the State Society should, as a whole and not simply through a small committee, familiarize itself with this big, broad subject of Social Insurance, and that its members should not, ostrich-like, bury their heads in the sand, refusing to see the issue and meet it squarely.

Your Committee on New Business then recommended, and you adopted, the following:

(a) That the House of Delegates concur in the conclusions of the Special Committee, that the legal institution of the proposed plan of compulsory health insurance by the State of California does not seem to be advisable at this time, and that our Council be instructed to at once take steps to see to it that our viewpoint in this matter be made as politically effective as possible.

(b) That the present Special Committee on Social Health Insurance be continued, and be requested to further study this problem, and to make a report thereon at our next annual meeting.

(c) That the House of Delegates adopt, in addition, the resolution introduced, to-wit:

Whereas, There is pending before the State Legislature an Act to enable further study of the health insurance problem, with a view to providing for the State of California a compulsory health insurance for wage workers, and

Whereas, The operation of health insurance laws in force in other parts of the world has not been a marked success in accomplishing that for which they were intended, and

Whereas, the State of California has so recently embarked upon the enactment of social insurance laws in the shape of industrial accident insurance, the efficiency and full use of which it has not yet had sufficient opportunity to learn (witness the pending Act before the Legislature, which changes some features and readjusts the whole working of that law), be it

Resolved, By the Medical Society of the State of California, that although such health insurance may quite possibly become highly desirable at some future day, for the present it is best to withhold legislation until such time as experience has proven the worth of social insurance as we now have it, and until political and economic affairs of our country have again become normal.

Since these resolutions were adopted, the amendment to the constitution, proposed by the Social Insurance Commission, has received the endorsement of both houses in the Legislature, and will be submitted to the citizens of the State in November, 1918.

As a matter of fact, the enabling amendment, or act, as it is called, was rather bitterly opposed in the Legislature by interests antagonistic to our profession (the Senate voted against it at first 21 to 11), on the ground that it would give too much power and wealth to the medical profession. When informed that your House of Delegates feared the contrary, this opposition to the act quickly disappeared.

And now we find that many different political, economic, social and industrial groups and bodies have gone on record as favoring some form of health insurance in this State. It was endorsed by the California State Federation of Labor by a 2 to 1 vote, at its 1918 annual meeting.

It was unanimously endorsed by the State Building Trades Council at its 1918 annual meeting.

Further than this, organized labor has gone on record for it in eleven States, the New York Federation of Labor, on February 6, 1918, not only endorsing the principle, but, without one dissenting vote, endorsing a bill prepared by their Health Committee in conjunction with their Legislative Committee and Executive Council.

In addition, nine of the International Unions, the Women's Trades Union League and the Southern Labor Congress have endorsed health insurance legislation.

Senator Johnson went on record in favor of social health insurance in his farewell address to the Legislature of January 8, 1917. Governor Stephens went on record in favor of social health insurance, as well as other forms of social insurance, in his speech of March 23, 1917. He went so far as to say that "social insurance might well be deemed as related to the pension system—a field of governmental activity, that has the approval and sanction of all society," after telling of the Commission's activities and the amendment and the recommendation, and stating that through social insurance the protection of citizens against poverty could be achieved.

The annual convention of State Iroquois Clubs unanimously endorsed (in February, 1918) Social Health Insurance and Senate Amendment No. 26.

Mr. J. O. Hayes, in announcing his candidacy and the principles for which he stood, declared himself for some form of health, maternity, unemployment and old age insurance.

Mr. Hency, whose name has been occasionally mentioned as a possible gubernatorial candidate, has in the past been so outspoken in his advocacy of such legislation as to leave little doubt as to what his attitude may be on the present issue.

Mr. Chester Rowell, editor of the Fresno Republican, a man widely and well known throughout the

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

State, is Chairman of the Social Insurance Commission of the State of California. He is one of the strongest advocates of health insurance, and upon his return from the South Sea Islands will do all he can to foster the movement.

In our profession, there are several who have declared themselves in favor of health insurance. We cannot totally ignore the opinions of men like W. A. Evans, Alexander Lambert, Frank Billings, H. E. Mock, J. Herrick, and a host of others.

(N. B. We would like to emphasize the fact that in spite of literature gotten out by the Insurance Economics League, Dr. Lambert has not "changed front," but is still supporting the health insurance movement.)

On the other hand, in New York the bill now before the Legislature is being opposed by every county medical unit in the State.

It may be that your House of Delegates still feels as it did a year ago, that for the good of the community it would be unwise at this time to give the Legislature power to even consider such legislation. This attitude may be the correct one to assume, considering the large number of medical men now away on war duty, and the effect of their absence on medical practice in our State. If you take this attitude and wish to defeat the amendment, you must be prepared for a strong fight. You may be successful. You will not be alone. You will have the support of strong and wealthy allies, the aid of powerful and well organized interests.

First of all you will be joining hands with Christian Scientists who so far, in this State at least, have been carrying on a strong campaign against health insurance, fearing, as they do, the possibility of being taken seriously and classed, as they have always claimed to be, a religion. They have fought all who wished to regulate or license them on this ground, and have denied that they attempted to practice medicine, and insisted that they were not a business.

But watch your first allies carefully. If they can be assured of equal recognition with the medical profession, acting under Health Insurance laws, you will find them switching around so fast it will make your heads turn. This is no idle, empty statement. It would mean the recognition by the State of a group of individuals (not recognized by the Federal authorities) as competent to practice medicine. Do you now understand their present opposition? Do you understand what they are working for? We are even told that a referendum may be asked if any bill, ignoring them, be passed by the Legislature.

Your second group of rich and powerful allies are the insurance companies. They have not waited for you to enter the fight. The "Insurance Economics Society of America, Detroit, Michigan," has already gotten out a "Special California Bulletin A-1," with a picture of the Kaiser on its front page and these words: "Made in Germany. Do you want it in California?" This Society sent several thousand copies of its Special Bulletin to the San Francisco Chamber of Commerce. The Chamber, I am told, returned them with an expression that might be construed as thanks. They have sent them to commercial bodies in practically every other city and town, and to almost every member of the medical profession. A doctor in the employ of insurance companies in this State has already started on a tour of your various component societies, to warn you and enlist your aid—a man in the employ of your former enemies —for the moment, your allies.

Insurance companies will be your faithful friends and allies—most of you know how long. Just so long as the Legislature agrees to keep them out of the health insurance field. That was their attitude with industrial accident insurance. But for a moment give them the opportunity of coming in under the law, and see what happens. It would not surprise us to see them paying premiums to get back copies of "Special Bulletin A-1."

Your Committee recognizes the duty our profession owes to the public. If the citizens of this State, by their votes in November, show us that they wish to try out some form of health insurance, we should be willing and glad to help them. As a committee, we are making no recommendation, preferring to leave it to your House of Delegates to decide what attitude to take on the amendment.

If you go on record as against the principle of health insurance, your action must be final and what follows will not need your consideration. In the event of the passage of the amendment in November, you will have, as a body, deprived yourself of the right to a hearing. In other words, if you object to the whole thing on any ground other than "war conditions," you may later be accused of trying to make a bargain to save yourselves.

Your Committee feels that if the citizens of this State endorse the amendment, they will also look to us to guarantee them proper medical care. In return, they will assure us their support in our attempts to properly organize, standardize and finance the medical profession, so as to give the public the best possible service, and this without in any way asking us to lower our standards of education, ethics, or of living.

To protect the public, and to guarantee to it the very best service, there are certain principles which will have to be incorporated in whatever Health Insurance Bill may be proposed to the Legislature. It is absolutely necessary for the medical profession to agree upon these essentials, and having agreed upon them, to fight for their inclusion. The profession should refuse to work under any proposed law that does not include them.

We have therefore outlined, as follows, the medical provisions which we believe this Society should endorse. We stand for them, each and every one of them, and believe you should adopt them all and be ready to fight for them. Anything less would be failure on our part, to protect the public which looks to us for guidance in these matters.

1. One member of the Social Insurance Commission should be an individual duly licensed under the laws of the State of California to practice medicine and surgery.

2. There should also be a Medical Director (duly licensed under the laws of the State of California to practice medicine and surgery), who shall be responsible to the Commission for the carrying out of the medical provisions of the act.

3. The Commission shall not allow any individual to accept or assume responsibility for the care or treatment of any sick insured except an individual duly licensed to practice medicine and surgery under the laws of the State of California.

4. Each insured shall have free and unrestricted right to choose the services of any physician duly licensed under the laws of the State of California to practice medicine and surgery, provided that having made the choice he shall not have the privilege to change within six months, except upon appeal to and with the consent of the medical director.

5. The medical profession must be guaranteed an adequate income. The only practical way of guaranteeing this is by payment to the physician on a capitation basis. This method of financing payment for medical service should be adopted.

6. The minimum capitation amount should be $5.00, exclusive of specialists' service, for which a fund should be created, on a basis of at least $1.00 per capita.

7. The maximum number of individuals that may register with one physician should be 2000, this

number having proved satisfactory in British practice.

8. The act should provide for the division of the State into districts, sufficiently small to form a proper administrative unit. Each district should have over it a medical supervisor who should be a full time salaried man, licensed under the State of California, to practice medicine and surgery.

9. The district medical supervisor should be responsible for the standards of work and the proper personal relations between physicians and the insured in his district. He would have no absolute power, e.g. such as depriving a doctor of his right to care for sick insured, but technically, he might often be called upon to decide as to the eligibility of an individual for sick benefit.

He should at all times represent the Commission's interest in the district.

It should be his duty to refer all questions seriously involving the integrity or professional ability of physicians employed under the act to a tribunal that shall be established by the Commission for the adjudication of such matters.

10. The Commission should provide in each district, diagnostic centers. These diagnostic centers should be sufficient in number, and technically so equipped, as to guarantee each insured all modern aids to diagnosis and treatment.

11. The services of a diagnostic center should be free to physicians for insured patients. These centers should be equipped by the State and should be restricted to the use of insured patients.

12. To each diagnostic center should be attached a group of specialists to include at least four. These men should devote a certain number of hours a day to the work of the center., e.g. 9 to 12 on week days, and on this basis should be paid a minimum of $150 a month.

13. Specialists are to be chosen by a Medical Advisory Board, acting with the Medical Director, the Medical Advisory Board to be nominated to the Commission by all those State organizations whose members are all regularly licensed to practice medicine and surgery in the State of California together, possibly, with representatives of those physicians working under the act, and who are not members of the above State organizations.

14. Any physician refused employment by the Commission, either as a physician or as a specialist, may on demand be entitled to an examination given under the direction of the Medical Advisory Board.

15. Each district should be provided with dental operators and apparatus sufficient to maintain the mouths of insured in a healthy condition.

16. Each district should be provided with one or more nurses who shall act as assistants to the physicians and as sick visitants.

17. The act should be drawn in such a way that it will insure the maximum results in the prevention of disease by coordinating the activities of the physicians operating under the Social Insurance Act with those of the local and State Boards of Health and of the officers employed by the Public Health and Marine Hospital Service of the United States.

18. To work the insurance act will demand definite sacrifice on the part of the medical profession, which considers social insurance to be a social duty in the nature of a beneficence. Physicians, therefore, cannot be expected to serve under the act if any profit making organizations be allowed to share in the administration of the law or to derive any gain from the administration of the law or any of its provisions.

19. The health insurance system should provide for not only the same persons or classes of persons as those who are under the existing Workmen's Compensation System, but should include those engaged in farm labor and in household domestic service.

20. There should be some provision in the act for the care of the casual worker.

21. Inasmuch as physicians will, under any health insurance act, become employees of the State, and responsible to the Commission for their standards of professional service, there must be some provision in the act, abrogating the individual liability of physicians for services rendered the insured.

Respectfully submitted.

(Signed) RENÉ BINE,
Chairman, Committee on Social Insurance.

NEW BUSINESS.

The recommendations contained in the President's Report, Amendments to the Constitution and By-Laws recommended by the Council, together with resolutions presented by various members of the Medical Society were referred to the Reference Committee. (See Report of Reference Committee Second Session of the House of Delegates.)

Announcement of the President.

The President then announced that the Council had appointed the following men to act as a Committee on the award of the Barbat prize for the best scientific paper:

Committee—Fitch C. E. Mattison, Pasadena; Sol Hyman, San Francisco; Geo. H. Evans, San Francisco.

Address of Barbara Nachtrieb Grimes.

Dr. René Bine moved that the privilege of the floor be granted to Barbara Nachtrieb Grimes, which was duly seconded and carried. Mrs. Grimes then took the floor and addressed the House on the subject of Social Health Insurance.

The meeting was adjourned to meet Wednesday evening, April 17th, at 8:30 o'clock.

SECOND SESSION
Wednesday Evening, April 17, 1918, at 8:30 o'clock.

ROLL CALL.

The roll being called, eighty-five Delegates were found to be present and the President, J. Henry Barbat, in the chair, declared that a quorum of Delegates was present and that the House was ready for business.

The President then made the announcement that the place of meeting for 1919 would be Hotel Potter, Santa Barbara, California.

ELECTION OF OFFICERS.

Nominations for President were declared in order.

President—Dr. C. Van Zwalenburg of Riverside was nominated for President by Dr. Andrew S. Lobingier of Los Angeles, said nomination being duly seconded. On motion, duly seconded, the Secretary was instructed to cast the ballot of the House for Dr. C. Van Zwalenburg for President. The Secretary duly cast the ballot, and Dr. C. Van Zwalenburg was duly declared elected President of the Society for the ensuing year.

Nominations for First Vice-President were declared in order.

First Vice-President—Dr. John H. Graves of San Francisco was nominated for First Vice-President, said nomination being duly seconded. On

motion, duly seconded, the Secretary was instructed to cast the ballot of the House for Dr. John H. Graves for First Vice-President. The Secretary duly cast the ballot, and Dr. John H. Graves was duly declared elected First Vice-President of the Society for the ensuing year.

Nominations for Second Vice-President were declared in order.

Second Vice-President—Dr. Ferdinand Stabel of Redding was nominated for Second Vice-President, said nomination being duly seconded. On motion, duly seconded, the Secretary was instructed to cast the ballot of the House for Dr. Ferdinand Stabel for Second Vice-President. The Secretary duly cast the ballot, and Dr. Ferdinand Stabel was duly declared elected Second Vice-President of the Society for the ensuing year.

Nominations for Secretary were declared in order.

Secretary—Dr. Saxton Pope of San Francisco was nominated for Secretary, said nomination being duly seconded. On motion, duly seconded, the President cast the ballot of the House for Dr. Saxton Pope for Secretary, and Dr. Saxton Pope was duly declared elected Secretary of the Society for the ensuing year.

Nominations for Councilors were declared in order.

Councilors.

First District—Dr. John C. King of Banning was nominated for Councilor for the First District, said nomination being duly seconded. On motion, duly seconded, the Secretary was instructed to cast the ballot of the House for Dr. John C. King for Councilor for the First District. The Secretary duly cast the ballot, and Dr. John C. King was duly declared elected Councilor for the First District for the ensuing year.

Third District—Dr. T. C. Edwards of Salinas was nominated for Councilor for the Third District, said nomination being duly seconded. On motion, duly seconded, the Secretary was instructed to cast the ballot of the House for Dr. T. C. Edwards for Councilor for the Third District. The Secretary duly cast the ballot, and Dr. T. C. Edwards was duly declared elected Councilor for the Third District (to succeed himself) for the ensuing year.

Fourth District—Dr. George H. Aiken of Fresno was nominated for Councilor for the Fourth District, said nomination being duly seconded. On motion, duly seconded, the Secretary was instructed to cast the ballot of the House for Dr. George H. Aiken for Councilor for the Fourth District. The Secretary duly cast the ballot, and Dr. George H. Aiken was duly declared elected Councilor for the Fourth District (to succeed himself) for the ensuing year.

At Large—Dr. H. A. L. Ryfkogel of San Francisco was nominated for Councilor at Large, said nomination being duly seconded. On motion, duly seconded, the Secretary was instructed to cast the ballot of the House for Dr. H. A. L. Ryfkogel for Councilor at Large. The Secretary duly cast the ballot, and Dr. H. A. L. Ryfkogel was duly declared elected Councilor at Large (to succeed himself) for the ensuing year.

Nominations for Committee on Scientific Program and Work were declared in order.

Committee on Scientific Program and Work—On motion, duly seconded, Dr. Lemuel P. Adams of Oakland was nominated to serve on the Committee on Scientific Program and Work. On motion, duly seconded, nominations were closed, and Dr. Lemuel P. Adams was duly declared elected.

On motion, duly seconded, Dr. E. C. Fleischner of San Francisco and Dr. F. M. Pottenger of Monrovia were elected temporarily to take the places of Dr. Robert A. Peers of Colfax and Dr. Walter V. Brem of Los Angeles, who are in service in the U. S. A.

The President announced the Committee on Scientific Program and Work for 1918, as follows: Fitch C. E. Mattison, Chairman, Pasadena; E. C. Fleischner, San Francisco; F. M. Pottenger, Monrovia; Lemuel P. Adams, Oakland.

Motions for Committee on Public Policy and Legislation were declared in order.

Committee on Public Policy and Legislation—On motion, duly seconded, Dr. F. F. Gundrum of Sacramento and Dr. Wm. Duffield of Los Angeles were nominated and declared elected to serve on the Committee on Public Policy and Legislation.

The President announced the Committee on Public Policy and Legislation for 1918, as follows: Ray L. Wilbur, Stanford University; Wm. LeMoyne Wills, Los Angeles; Wm. R. Molony, Los Angeles; Walter B. Coffey, San Francisco; F. F. Gundrum, Sacramento; Wm. Duffield, Los Angeles.

Committee on Arrangements—The President announced that the Committee on Arrangements would be appointed by the Council.

Committee on Public Health—On motion, duly seconded, the Committee on Public Health was re-elected.

The President announced the Committee on Public Health for 1918, as follows: Robert T. Legge, Chairman, Berkeley; A. B. Cooke, Los Angeles; W. H. Irwin, Oakland; W. W. Roblee, Riverside; J. L. Pomeroy, Los Angeles.

Delegates to the A. M. A.—On nomination and ballot, duly had and taken, the following were elected as Delegates to the American Medical Association: (Two years) George H. Kress, Los Angeles; (two years) Victor G. Vecki, San Francisco; (one year) O. D. Hamlin, Oakland (to take the place of Dr. A. B. Spalding.)

Alternates—On nomination and ballot, duly had and taken, the following were elected as Alternates to the American Medical Association: (Two years) Wm. P. Lucas, San Francisco; (two years) Granville MacGowan, Los Angeles; (1 year) A. W. Hoisholt, Napa; (one year) E. C. Fleischner, San Francisco. (H. P. Newman, San Diego, was elected last year (1917) to serve for a term of two years.)

The President then called upon Dr. F. B. Carpenter, Chairman of the Reference Committee, for a report of that Committee.

Upon the motion of H. Bert Ellis, seconded by James H. Parkinson, it was unanimously

Resolved, that the report be taken up, read and approved, section by section.

REPORT OF THE COMMITTEE ON NEW BUSINESS.

Your Committee on New Business begs leave to report the following for the consideration of the House of Delegates:

I.

Report of the President.

It is the sense of your Committee that the transactions of the Council could be carried on to better advantage if the matter of the choice of the Chairman of the Council be left in the hands of that body.

Your Committee further recommends the adoption of the following amendment:

Amendment to By-Laws.

The Society shall elect a President for the next succeeding year who shall remain "President-elect" for one year preceding his assumption of the duties of President. While President-elect, he shall be ex-officio a member of the Council.

Publication Committee.

The recommendation in reference to the election of the Committee on Publication is dealt with in today's action by the Council, and will be presented in their report for your consideration.

We recommend the further careful consideration of the President's paper by the members.

II.

Report of the Chairman of the Council.

Recommended that it be accepted and placed on file.

III.

Report of Harry E. Alderson.

This Committee endorses the report of the Chairman of the Scientific Program and recommends that it be printed in the JOURNAL, and that two thousand reprints be made for distribution.

IV.

Resolutions.

Your Committee recommends the adoption of the following resolutions:

RESOLUTION NO. 1.

Presented by the Council of the Medical Society of the State of California.

The Council recommends to the House of Delegates, that all members actively in military service shall be exempt from the payment of dues to the State Society and shall be carried in full standing during their absence from professional work.

RESOLUTION NO. 2.

Presented by the Council of the Medical Society of the State of California.

The Council recommends to the House of Delegates that a special war tax of $1.00 per capita be levied on all members of the State Society not in military service in order to meet the deficit occasioned by military enrollment.

RESOLUTION NO. 3.

Presented by René Bine.

As expressive of the sentiment of the County Secretaries, be it resolved that all members of the Medical Society of the State of California on the membership roll during the year 1917, or thereafter, who actively enter the public service of our country, shall be considered as members of the Medical Society in good standing with all the rights and privileges of such membership; provided, however, that such military colleagues shall be exempt from State Society assessments for the years while in active service during the present war and their absence from professional work.

RESOLUTION NO. 4.

The following resolution was presented by F. C. Piersol:

Resolved, that this body recommend to the American Medical Association that during the period of the war all members of the American Medical Association who are in active service shall be given a fellowship by the American Medical Association during their active service in the Army or Navy.

RESOLUTION NO. 5.

The following resolution was presented by René Bine:

On endorsement and co-operation with the National Children's Year Program.

Resolved, that the Medical Society of the State of California endorses and will co-operate in the "National Children's Year Program" as put forth by the Children's Year Committee for California of the Woman's Committee of the Council of Defense of the State, and supported by the Board of Control of the State *by the granting of a special fund for its execution.*

RESOLUTION NO. 6.

Presented by George H. Kress. Amendment to Article VII, Section 6 of the By-Laws.

Resolved, that the House of Delegates shall authorize the Council or the President to appoint Committees to deal with various scientific or special features as it may deem fit, not specifically mentioned in the Constitution or By-Laws (to be referred to the Committee on Amendments.)

Your Committee does not recommend adoption.

RESOLUTION NO. 7.

Presented by George H. Kress.

Resolved, that it is the sense of the House of Delegates that the Council and officers in the future shall provide the proper number of medical stenographers for the scientific sections.

Not recommended by Committee.

RESOLUTION NO. 8.

The following resolution was presented by George H. Evans:

Resolved, that the Medical Society of the State of California urges on the Board of Directors of the State Home for Feeble Minded at Glen Ellen and on the Governor of the State of California that the choice of superintendent of this Institution shall be made on a basis of scientific training and experience appropriate along the lines of most modern development.

RESOLUTION NO. 9.

Presented by George H. Kress. Amendment to Article X, Section 5.

Any such new member joining a component County Society at any time during the Society's fiscal year shall pay the regular assessment to be applied as such for the fiscal year in which he joins; provided, that if such new member joins after July 1st of any fiscal year, then the assess-

ment to be paid by him shall be only one-half the regular assessment.

RESOLUTION NO. 10.

Presented by P. K. Brown and George H. Kress.

Whereas, women physicians in Great Britain, France, Russia, Serbia and Germany have performed invaluable services during the present war, services which have been signally recognized by their respective governments; and

Whereas, in the United States there are a large number of women physicians fitted and equipped to render equally valuable service, and to render service as efficient and valuable as can be rendered by men physicians, not only as anaesthetists, radiographers, and hospital and laboratory directors, but also as surgeons; now therefore

Be it resolved, that the Medical Society of the State of California express its desire that the American Medical Association do all in its power to further the utilization of the service of women physicians of the country as members in full standing of the Medical Section of the Officers' Reserve Corps, and United States Public Health Service.

RESOLUTION NO. 11.

Amendment to Amendment No 1, presented by James H. Parkinson.

That all proposed amendments to the By-Laws be referred back to the Committee on Amendments.

RESOLUTION NO. 12.

The following resolution was presented by Dr. Morton R. Gibbons:

Whereas, our European Allies have, in their vast necessity, found it advisable to undertake a systematic rehabilitation of crippled soldiers through occupational therapeutics, followed by re-education; and,

Whereas, there are more people crippled in industry than there will be in our Armies if all the men now in service enter the field, if their experience corresponds to that of the Allies; and,

Whereas, a bill has recently been introduced in Congress which, if passed, will provide occupational therapeutic hospitals and auxiliary work shops for rehabilitation of crippled soldiers and sailors, and will provide re-education with compensation for services during rehabilitation;

Therefore, be it hereby resolved by the Medical Society of the State of California in its forty-seventh annual meeting, held at Del Monte, April 16th, 17th and 18th, 1918, that the necessities of the industrially injured *require* and *warrant* that the scope of the above-referred to legislation be broadened to permit of provision for rehabilitation and training of those who have been incapacitated by industrial injury or by personal injury.

RESOLUTION NO. 13.

Your Committee recommends the following resolution by Dr. Charles C. Browning:

Resolved, that if Senate Amendment No. 26, which is to be voted on at the California State General Election in November of this year carries, that it is the sense of this body, that the medical profession of this State should co-operate with the Social Insurance Commission and put forth its best efforts to frame legislation which shall guarantee the public the best possible medical service.

In order that these interests be so protected, your Committee further recommends that the following provisions advanced by the Committee, and such others as it may from time to time recommend, be incorporated before Amendment No. 26 receives the sanction of the Medical Society:

1. One member of the Social Insurance Commission should be an individual duly licensed under the laws of the State of California, to practice medicine and surgery.

2. There should also be a medical director who shall be responsible for the carrying out of medical provisions of the act.

3. The Commission shall not allow any individual to accept or assume responsibility for the care or treatment of any sick insured except that individual be duly licensed to practice medicine and surgery under the laws of the State of California.

4. Each insured shall have free and unrestricted right to choose the services of any physician employed by the Commission, providing that having made the choice he shall not have the privilege to change within six months.

5. The medical profession must be guaranteed an adequate income. The only practical way of guaranteeing this is by payment to the physician on a capitation basis. This method of financing payment for medical service should be adopted.

6. The minimum capitation amount should be $5.00, exclusive of specialists' service, for which $1.00 should be allowed.

7. The maximum number of individuals that may register with one physician should be 2000, this number having proved satisfactory in British practice.

8. The act should provide for the division of the State into districts, sufficiently small to form a proper administrative unit. Each district should have over it a medical supervisor who should be a full-time salaried man, licensed under the State of California, to practice medicine and surgery. (Salary $5000.)

9. The district medical supervisor should be responsible for the standards of work and the proper personal relations between panel physicians and the insured in his district. He would have no absolute power, e. g., such as dismissing a doctor from the panel, but technically might often be called upon to decide as to the eligibility of an individual for sick benefit.

He should at all times represent the Commission's interest in the district.

It should be his duty to refer all questions seriously involving the integrity or professional ability of panel physicians to a tribunal that shall be established by the Commission for the adjustment of such matters.

10. The Commission should provide in each district, diagnostic centers. These diagnostic centers should be sufficient in number, and technically so equipped, as to guarantee each insured all modern aids to diagnosis and treatment.

11. The services of a diagnostic center should be free to physicians for panel patients. These centers

should be equipped by the State and should be restricted to the use of panel patients.

12. To each diagnostic center should be attached a group of specialists to include at least four. These men should devote a certain number of hours a day to the work of the center, e. g., 9 to 12 on week days, and on this basis should be paid a minimum of $150 a month.

13. Specialists are to be chosen by a Medical Advisory Board acting with the Medical Director, the Medical Advisory Board to be nominated to the Commission by those State organizations whose members are all regularly licensed to practice medicine and surgery in the State of California, together with representatives of the panel physicians.

14. Any physician refused employment by the Commission either as a panel physician or as a specialist may on demand be entitled to an examination given under the direction of the Medical Advisory Board.

15. Each district should be provided with dental operators and apparatus sufficient to maintain the mouths of insured in a healthy condition.

16. Each panel should be provided with one or more nurses who shall act as assistants to the panel physician and as sick visitants.

17. The act should be drawn in such a way that it will insure the maximum results in the prevention of disease by co-ordinating the activities of the physicians operating under the Social Insurance Act with those of the local and State Boards of Health and of the Federal officers employed by the Public Health Service of the United States.

18. To carry out the provisions of the act will demand definite sacrifice on the part of the medical profession who consider social insurance to be a social duty in the nature of a beneficence. They therefore cannot be expected to serve under the act if any profit-making organization is allowed to share in the administration of the law and to derive gain from administering its provisions.

19. Under such an act as is proposed, the State would set standards of work to be done and supervise the results. Therefore, it is the sense of the Medical Society of the State of California that the State must assume legal responsibility for the results of medical and surgical treatment and relieve the physician from liability suits.

20. That the Insurance Commission of the State be requested to have some firms that specialize in systems for physicians prepare forms for physicians' records and reports.

21. It is the sense of the Society that only wage-earners whose gross annual incomes are less than $1500 should be included in the provisions of this act.

The first twelve resolutions contained in this report were unanimously adopted without comment.

The Thomas-Graves and Browning resolutions were considered at great length on the floor of the House of Delegates and a general discussion ensued. The House was unable to come to a unanimous opinion. The subject of Social Health Insurance was debated by the following: C. P. Thomas, J. H. Graves, G. A. Hare, Geo. H. Kress, Langley Porter, René Bine, W. B. Coffey, W. C. Alvarez, Dudley Smith, W. C. Voorsanger, Fitch C. E. Mattison, H. Bert Ellis, Geo. E. Ebright.

The Thomas-Graves and Browning resolutions are as follows:

Thomas Resolution.

Be it resolved, that the Medical Society of the State of California earnestly protests against the adoption of the proposed Constitutional Amendment enabling the Legislature of the State of California to press the so-called Health Insurance Bill, for the following reasons:

First, that it has been impossible for a sufficient number of the citizens of the State to properly study such a measure and to be able to express an intelligent opinion on such a momentous subject by the time the vote will be taken.

And for the further reason that at this time when every energy and all the wealth of this State may be needed for the successful prosecution of the war against the foes of humanity, it is no time to burden ourselves with a measure which will cost somewhere between twenty-five and fifty millions of dollars annually to insure a doubtful success.

Graves Resolution.

Resolved, that this Society go on record as being in full accord with all the efforts to relieve destitution and preventable illness in California, and that we advise a most thorough study and analysis of the same and further, that as regards the proposed health insurance legislation, that we advocate a still further study of this plan before we ask California to commit itself to its adoption.

Browning Resolution.

Resolved, that if Senate Amendment No. 26, which is to be voted on at the California State General Election in November of this year carries, that it is the sense of this body that the medical profession of this State should co-operate with the Social Insurance Commission and put forth its best efforts to frame legislation which shall guarantee the public the best possible medical service.

Dr. Langley Porter recommended that the Graves-Thomas resolution be stricken out.

Dr. Hare endorsed Porter's amendment, suggesting that the subject be referred to the Council.

After considerable discussion upon the motion of G. A. Hare, seconded by G. H. Evans, the following amendment was unanimously substituted:

"That the resolution relating to Social Insurance be referred to the Council with the recommendation that it, with the assistance of the general attorney, use every means within its power to secure such legislation as will best safeguard the interests of the medical profession."

Upon motion of Parkinson, seconded by H. Bert Ellis, it was unanimously

Resolved, that the report of the Reference Committee and the recommendation contained therein be accepted, with the exception of that part dealing with Social Insurance.

Dr. C. Van Zwalenburg, the incoming President, was then introduced by the Chairman and made a short verbal address.

Constitution and By-Laws.

Amendments to the Constitution and By-Laws were presented by Dr. Jas. H. Parkinson on behalf of the Council.

Dr. Geo. H. Evans made a motion that these amendments be laid on the table until next year. No second to this motion.

The following amendments to the Constitution were then presented for action at the next annual meeting:

CONSTITUTION OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

ARTICLE I.

Name and Object.

Section 1. The name of this Society shall be the "Medical Society of the State of California."

Sec. 2. The purpose of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of California, and to unite with similar societies of other States to form the American Medical Association; t oextend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians, to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE II.

Component Societies.

Component Societies shall consist of those county medical societies which hold charters from this Society.

ARTICLE III.

Composition of the Society.

Section 1. This Society shall consist of Members, Delegates, and Guests.

Sec. 2. Members—The Members of the Society shall be the members of the component county medical societies.

Sec. 3. Delegates—Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Society.

Sec. 4.—Guests—Any distinguished scientist, or any physician not a resident of this State, may become a guest during any Annual Session on invitation of the President or the officers of this Society, and shall be accorded the privilege of participating in all of the scientific work for that session. The President shall announce to the general meeting the names of such persons as have been invited to attend the meeting, and their names shall then be enrolled as guests of that annual meeting.

ARTICLE IV.

House of Delegates.

The House of Delegates shall be the legislative and business body of the Society, and shall consist of (1) Delegates elected by the component county societies, (2) the Councilors, and (3), ex-officio, the President and Secretary of this Society.

ARTICLE V.

Meetings.

Section 1. The regular meetings of this Society shall be held annually.

Sec. 2. Special meetings of the House of Delegates may be convened as the By-Laws provide.

Sec. 3. Twenty-five members shall constitute a quorum in the House of Delegates.

Sec. 4. The selection of the place of meeting, and the election of officers, shall be the first order of business of the House of Delegates at the second evening session of each annual meeting.

Sec. 5. All officers shall be elected by ballot, and shall serve until their successors are chosen and qualified.

ARTICLE VI.

Officers.

Section 1. The officers of this Society shall be a President, a First Vice-President, a Second Vice-President, a Secretary, two Assistant Secretaries, a Treasurer, Examiners or nominees for appointment as Examiners on the Board of Medical Examiners as may be required by the laws of the State of California governing the practice of medicine, and twelve Councilors, of whom one shall be elected from each of the nine Councilor districts and three at large. Not more than three Councilors shall be elected from any one Councilor district. These officers shall be elected by the House of Delegates at the time and in the manner duly provided in this Constitution and By-Laws.

Sec. 2. The officers, except the Treasurer and the Councilors, shall be elected annually. The terms of the elected Councilors shall be for three years, those first elected serving one, two and three years, as may be arranged.

Section 3. No delegates shall be eligible to any office named in the preceding section, except that of Councilor, and no person shall be elected to any such office who has not been a member of the Society for the past two years.

ARTICLE VII.

Council.

The Council shall consist of the Councilors and the President and Secretary, ex-officio. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Five Councilors shall constitute a quorum.

ARTICLE VIII.

Section and District Societies.

The House of Delegates may provide for a division of the scientific work of the Society into appropriate Sections, and for the organization of such District Societies as will promote the best interests of the profession, such societies to be

composed exclusively of members of component county societies.

ARTICLE IX.

Reciprocity of Membership With Other State Societies.

In order to broaden professional fellowship, this Society is ready to arrange with other State Medical Associations for an interchange of certificates of membership, so that members moving from one State to another may avoid the formality of re-election.

ARTICLE X.

Funds and Expenses.

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of $2.00 per capita per annum, except on a four-fifths vote of the Delegates. The fiscal year of the Society shall be from January 1st to December 31st. The number of members in good standing in each component society on the first day of January of each year shall be taken as the basis for the assessment for that fiscal year, as fixed by the House of Delegates. Funds may also be raised by voluntary contributions from the Society's publications, and in any other manner approved by the House of Delegates. Funds may be appropriated by the House of Delegates to defray the expenses of the Society, for publications and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be referred to the Finance Committee before action is taken thereon.

ARTICLE XI.

Referendum.

Section 1. A general meeting of the Society may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates, and when so ordered, the House of Delegates shall submit such question to the members of the Society, who may vote by mail or in person, and, if the members voting shall comprise a majority of all the members of the Society, a majority of such vote shall determine the question and be binding on the House of Delegates.

Sec. 2. The House of Delegates may, by a two-thirds vote of its own members, submit any question before it to a general referendum, as provided in the preceding section, and the result shall be binding on the House of Delegates.

ARTICLE XII.

The Seal.

The Society shall have a common seal, with power to break, change or renew the same at pleasure.

ARTICLE XIII.

Amendments.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates present at any annual session, provided that such amendment shall have been presented in open meeting at the previous annual session, and that it shall have been published twice during the year in the Journal of this Society, or sent officially to each component society for at least two months before the meeting at which final action is to be taken.

CONSTITUTION OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

(Incorporating Amendments proposed at Annual Meeting held at Del Monte, April 1918,—to be voted upon at Annual Meeting to be held at Santa Barbara, April 1919).

Constitution.

ARTICLE I.

NAME AND OBJECT.

Section 1. The name of this Society shall be the "Medical Society of the State of California." — No change from original.

Sec. 2. The purpose of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of California, and to unite with similar societies of other States to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE II.

COMPONENT SOCIETIES.

Component Societies shall consist of those county medical societies which hold charters from this Society. — No change from original.

ARTICLE III.

MEMBERS.

Section 1. Members—The Members of the Society shall be the members of the component county medical societies, excluding associate or honorary members thereof. — Proposed amendment.

Sec. 2. Guests—Any distinguished scientist, associate or honorary member of any component county society, or any physician not a resident of this State, may become a guest during any Annual Meeting on invitation of the President or the officers of this Society, and shall be accorded the privilege of participating in all of the scientific work for that meeting. The President shall announce to the general meeting the names of such persons as have been invited to attend the meeting, and their names shall then be enrolled as guests of that annual meeting.

ARTICLE IV.

HOUSE OF DELEGATES.

Proposed amendment.

The House of Delegates shall be the legislative body of the Society, and shall consist of (1) Delegates elected by the component county societies, (2) the Councilors, and (3) ex-officio, the President and Secretary of this Society.

ARTICLE V.

MEETINGS.

Proposed amendment.

Section 1. The regular meetings of this Society shall be held annually.

Sec. 2. Special meetings of the House of Delegates may be convened as the By-Laws provide.

Sec. 3. Twenty-five members shall constitute a quorum in the House of Delegates.

Sec. 4. The election of officers shall be the first order of business of the House of Delegates at the second evening session of each annual meeting.

Sec. 5. All officers shall be elected by ballot, and shall serve until their successors are elected and qualified.

ARTICLE VI.

OFFICERS.

Proposed amendment.

Section 1. The officers of this Society shall be a President, a President-elect, a First Vice-President, a Second Vice-President, a Secretary, and fifteen Councilors, of whom one shall be elected from each of the nine Councilor districts and six at large, two of whom shall be elected from the County of Los Angeles, one from the City and County of San Francisco, one from the County of Alameda, and two from the remainder of the State. Not more than three Councilors shall be elected from any one Councilor district. These officers shall be elected by the House of Delegates at the time and in the manner duly provided in this Constitution and By-Laws.

Sec. 2. The officers, except the Councilors, shall be elected annually. The terms of the elected Councilors shall be for three years, those first elected serving one, two and three years, as may be arranged.

Barbat amendment.

Sec. 3. The Society shall elect a President for the next succeeding year who shall remain President-elect for one year preceding his assumption of the office of President. While President-elect he shall be ex-officio a member of the Council.

Sec. 4. No delegates shall be eligible to any office named in the preceding section, except that of Councilor, and no person shall be elected to any such office who has not been a member of the Society for the past two years.

ARTICLE VII.

COUNCIL.

Proposed amendment.

The Council shall consist of the Councilors and the President, the President-elect and the Secretary, ex-officio. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Five Councilors shall constitute a quorum.

ARTICLE VIII.

SECTION AND DISTRICT SOCIETIES.

No change from original.

The House of Delegates may provide for a division of the scientific work of the Society into appropriate Sections, and for the organization of such District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE IX.

FUNDS AND EXPENSES.

Proposed amendment.

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates by a four-fifths vote thereof. The fiscal year of the Society shall be from January 1st to December 31st. The number of members in good standing in each component society on the first day of March of each year shall be taken as the basis for the assessment for that fiscal year, as fixed by the House of Delegates. Funds may also be raised by voluntary contributions from the Society's publications, and in any other manner approved by the House of Delegates. Funds may be appropriated by the House of Delegates to defray the expenses of the Society, for publications and for such other purposes as will promote the welfare of the profession.

ARTICLE X.

REFERENDUM.

No change from original.

Section 1. A general meeting of the Society may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates, and when so ordered, the House of Delegates shall submit such question to the members of the Society, who may vote by mail or in person, and, if the members voting shall comprise a majority of all the members of the Society, a majority of such vote shall determine the question and be binding on the House of Delegates.

Sec. 2. The House of Delegates may, by a two-thirds vote of its own members, submit any question before it to a general referendum, as provided in the preceding section, and the result shall be binding on the House of Delegates.

ARTICLE XI.

THE SEAL.

Proposed amendment.

The Society shall have a common seal, with such inscription thereon as the Council shall prescribe.

ARTICLE XII.

AMENDMENTS.

Proposed amendment.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates present at any annual meeting, provided that such amendment shall have been presented in open meeting at the previous annual meeting, and that it shall have been published twice during the year in the Journal of this Society, or sent officially to each component society for at least two months before the meeting at which final action is to be taken.

Upon motion it was unanimously

Resolved, that owing to the lateness of the hour the House of Delegates adjourn to meet at 9 o'clock A. M., April 18th, in the Art Gallery.

THIRD SESSION

of the House of Delegates, held Thursday Morning, April 18, 1918, 9:00 o'clock.

ROLL CALL.

On roll call a quorum was found present and acting.

General Attorney Hartley F. Peart then addressed the House on the subject of Legal Defense.

AMENDMENTS.

On motion of John C. Young, seconded by Geo. G. Reinle, it was unanimously

Resolved, that the Amendments to the By-Laws be read section by section, that they be adopted as read unless there be objection.

Mr. Hartley F. Peart, the general attorney, read each proposed amendment to the By-Laws and after discussion on motion, duly made and seconded, was duly adopted; and the By-Laws as thus duly amended read as follows, to-wit:

BY-LAWS OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

(As revised and amended at the Annual Meeting held at Del Monte, April 1918).

ARTICLE I.

MEMBERSHIP.

Section 1. All members of affiliated County Medical Societies, except associate or honorary members, shall by virtue of such membership, be members of this Society upon certification by the Secretary of the component Society of such membership and the receipt of the assessment for the fiscal year.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of its proceedings, nor receive its publications, until he has been relieved of such disability.

Sec. 3. It shall be the duty of the Secretary of each component society to furnish the Secretary of this Society, before the first day of March of each year, a list of all members in good standing (with addresses) on the first day of January of each year.

Sec. 4. Any physician residing in a county in which there is no county medical society in affiliation with this Society, may make application for membership to the county society of the county nearest to that in which he resides, or to that adjoining county society which he can most conveniently attend.

Sec. 5. Each member in attendance at the annual meeting shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified, by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at that meeting. No member shall take part in any of the proceedings of an annual meeting until he has complied with the provisions of this section.

Sec. 6. All members of this Society, on the membership roll during the year 1917, or thereafter, who actively enter the public service of the United States, shall be considered as members of this Society in good standing, with all rights and privileges of such membership, and shall be exempt from all assessments of this Society, including, if members thereof, assessments for the Indemnity Defense Fund, while in active service and absent from professional work during the present war.

ARTICLE II.

MEETINGS.

Section 1. The annual meeting of this Society shall convene on the third Tuesday in April of each year.

Sec. 2. Special meetings of the House of Delegates may be called by the President and shall be called by him upon the written request of at least twenty Delegates, provided that each Delegate is notified as to time, place, and object of the proposed meeting, by written notice, given at least ten days prior thereto.

Sec. 3. During the annual meeting of this Society, the general meeting shall convene each day at 9 a. m., and at such other times as it may, by resolution, determine, which times shall not conflict with the sessions of the House of Delegates. Section meetings may be provided for by the Committee of Arrangements. The House of Delegates shall meet each day at 8 p. m., or at such other time as will not conflict with the general meetings.

Sec. 4. The general meeting may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and to the public.

ARTICLE III.

HOUSE OF DELEGATES.

Section 1. The House of Delegates shall be the legislative body of the Society, and shall consist of delegates representing each component society.

Sec. 2. The House of Delegates shall meet at 8 p. m. on the first day of the annual session. It may adjourn from time to time as may be necessary to complete its business, provided that its hours shall conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program.

Sec. 3. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every twenty-five members, and one for each major fraction thereof, except in the event of reapportionment, as provided in Article V, Section 6; but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws shall be entitled to one delegate.

Sec. 4. Twenty-five delegates shall constitute a quorum.

Sec. 5. Delegates shall be elected for a term of two years, and those societies entitled to more than one representative are required to arrange

such election so that one-half of their delegates, as near as may be, shall be elected each year.

Sec. 6. At the first annual meeting of this Society, after the adoption of this Constitution and By-Laws, the delegates of component societies entitled to only one delegate, shall draw lots to determine which half of the delegates shall hold for one year. Thereafter all delegates shall hold for two years, or until their successors are chosen.

Sec. 7. The House of Delegates shall approve all memorials and resolutions of whatever character issued in the name of the Medical Society of the State of California before the same shall become effective.

Sec. 8. The sessions of the House of Delegates shall be open to all members of this Society, but, except upon invitation, they shall have no right to participate in its proceedings.

Sec. 9. The House of Delegates shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

Sec. 10. The House of Delegates shall have authority to appoint committees for special purposes from among members of the Society who are not members of it. Such committees shall report to the House of Delegates, and may be present and participate in the debate on their reports.

Sec. 11. The House of Delegates shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

Sec. 12. Members of the House of Delegates shall be designated by an appropriate badge.

ARTICLE IV.

DUTIES OF OFFICERS.

Section 1. The President shall preside at all meetings of the Society and of the House of Delegates; he shall appoint all committees not otherwise provided for; he shall deliver an annual address at such time as may be arranged, and perform such other duties as custom and parliamentary usage may require.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of the President's death, resignation or removal, the Council shall select one of the Vice-Presidents to succeed him.

Sec. 3. The Secretary shall attend the general meetings of the Society and the meetings of the House of Delegates and of the Council, and shall keep the minutes of their respective proceedings. He shall be ex-officio Secretary of the Council. He shall be custodian of all records, books and papers belonging to the Society, and shall keep account of and promptly turn over to the depositary all funds of the Society which come into his hands. He shall provide for the registration of the members and delegates at the annual meetings. He shall, with the co-operation of the Secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society. He shall aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Society. He shall perform such other duties as the Council shall direct. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council, and shall make an annual report to the House of Delegates. He shall supply each component society with the necessary blanks for making its annual report; he shall keep an account with the component societies, charging against each society its assessment, collect the same, and at once turn it over to the depositary. Acting with the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the Council. The Secretary shall file a bond to the Society with sufficient surety approved by the Council, in the sum of $2000, for the faithful performance of his duties.

Sec. 4. The depositary of the Society shall be a bank or trust company to be selected by the Council. All funds received for the Society by an officer or agent thereof shall be at once deposited with the depositary. The depositary shall pay out the money of the Society only upon a check or draft signed by the Secretary and countersigned by the Chairman of the Council. The Secretary shall issue such checks or drafts only upon vouchers approved by the Auditing Committee and signed by all the members thereof. A cash fund of two hundred dollars ($200.00) may be left with the Secretary, from which fund petty cash items may be paid. But no bill exceeding five dollars ($5.00) shall be paid except by check or draft and in the manner herein provided.

ARTICLE V.

Section 1. The Council shall meet on the day preceding the annual meeting and daily during the sessions. Regular meetings shall also be held quarterly, in January, April, July and October of each year, at least one of which shall be held in the southern section of the State. Special meetings may be called by the chairman at any time, and he shall call a special meeting upon the written request of at least three Councilors, provided written notice for not less than seven days, of the time, place and object of the proposed special meeting be given by the Secretary; and at the meeting held on the last day of the annual meeting of the Society it shall reorganize and outline the work for the ensuing year. It shall elect a Chairman who shall make an annual report to the House of Delegates of its proceedings. It shall have the power to invest the funds of the Society.

Sec. 2. In the event of a vacancy in the Council, or in the office of Secretary, or in any elective

office not otherwise provided for, the Council shall fill the vacancy until the next annual election.

Sec. 3. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into a society. Such a society when organized shall be entitled to all the rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 4. The Council shall provide for the publication and distribution of a periodical to be known as the "California State Journal of Medicine," or some similar title to be determined by the Council, and such other publications as may be necessary, and shall have authority to employ at such salary as it may deem proper, an Editor, who shall be responsible to the Council, and who shall properly edit and conduct the official journal and such other publications as may be authorized by the House of Delegates or the Council.

Sec. 5. The Council, as the Finance Committee of the House of Delegates, shall audit the accounts of all officers, committees and agents of the Society, at least once a year, and shall present a report to the House of Delegates.

Sec. 6. The Council shall divide the State into Councilor districts, according to the number of districts fixed by Article VI, Section 1 of the Constitution, specifying what counties each district shall include. Whenever the number of Delegates, as provided in Article III, Section 3, exceeds eighty, it shall make a reapportionment that shall bring the number of Delegates within this limit, after carefully examining the membership list of component societies to determine therefrom the number of delegates to which each county medical society shall be entitled. Such reapportionment to take place at the annual meeting next succeeding that at which the reapportionment is approved by the House of Delegates.

Sec. 7. The Council shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and By-Laws, and such county societies shall not amend or change the same, contrary thereto.

Sec. 8. The Council, when the best interest of the Society and profession will be promoted thereby, shall organize district medical societies, and all members of the component county societies, and no others, shall be members in such district societies.

Sec. 9. The Secretary, with the written authorization of the Chairman, may submit any urgent question to the Council by mail ballot.

Sec. 10. The Chairman shall appoint a committee of two who shall audit the accounts of the Society at least once every month, and who shall have general supervision of all the finances of the Society.

Sec. 11. The Council shall carefully investigate all charges of malpractice alleged against any member in good standing, and if it is found that such charges are groundless, it shall take such steps as it deems proper for the best interests of the Society. For such purpose it is authorized to employ an attorney, or attorneys, to advise or defend in all matters for, or on behalf of, the Society or members thereof.

Sec. 12. The Council shall appoint a Committee on Arrangements, to consist of three members, and who shall serve for one year. It shall provide suitable accommodations for the meeting places of the Society and of the House of Delegates, and of their respective committees, and shall have general charge of all the arrangements at the meeting place. Its chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the sessions, as occasion may require.

Sec. 13. The Publicity Bureau shall consist of the President of the Society, the Chairman of the Council, the Chairman of the Auditing Committee, the Secretary, the Editor and the General Attorney. The Bureau shall elect its own Chairman, and the Secretary shall act as secretary thereof. It shall keep a record of its proceedings and report same to the Council. It shall initiate action, investigate or take charge of all matters in which the welfare and the best interests of the public and of the Society are mutually concerned.

ARTICLE VI.

SCIENTIFIC WORK.

Section 1. The Committee on Scientific Work shall consist of the Secretary of the Society, the Secretaries of the Scientific Sections, and four members of the Society who shall be elected by the House of Delegates, one each year to serve for four years. The Secretary of the Society shall be the Chairman thereof. It shall determine the character and scope of the scientific proceedings of the Society, subject to the instructions of the House of Delegates.

Sec. 2. ORDER OF BUSINESS.

General Meeting.

1. Calling to Order.
2. Address of Welcome.
3. Address by President.
4. Reading and Discussion of Papers and Reports of Standing Committees.
5. Reading and Adoption of Minutes.
6. Adjournment.

House of Delegates.

1. Calling to Order.
2. Roll Call.
3. Report of President.
4. Report of Secretary.
5. Report of Council.
6. Report of Editor.
7. Report of the Chairman of the Auditing Committee.
8. Report of the Standing Committees.
9. Report of Special Committees.
10. Unfinished Business.
11. New Business.
12. Announcement of Place of Meeting.
13. Election of Officers and Delegates.
14. Reading and Adoption of Minutes before Adjournment of Each Session.
15. Adjournment.

Sec. 3. The above Order of Business of either Branch of this Society shall be subject to tempo-

rary change or suspension by a majority vote of all members present, except the election of Officers and Delegates, as provided in Article VI, Sections 1, 2 and 3 of the Constitution.

Sec. 4. No paper, address or report presented before the general meeting, except the address of the President, shall occupy more than twenty minutes. In discussion, no member shall be allowed to occupy more than five minutes, except by consent.

Sec. 5. The House of Delegates may elect, or authorize the President to appoint, or the Council may elect, or authorize the Chairman to appoint, special committees to serve for one year or until the next annual meeting, upon scientific subjects and work, not otherwise provided for.

ARTICLE VII.

COUNTY SOCIETIES.

Section 1. All component county societies of this Society or those which may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, on application, receive a charter from and become a component part of this Society.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Sec. 3. Charters shall be issued only upon approval of the Council or House of Delegates, and shall be signed by the President and Secretary of this Society. The Council or the House of Delegates shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county.

Sec. 5. Each county society shall judge of the qualifications of its own members, but, as such societies are the only portals of this Society and to the American Medical Association every reputable and legally registered physician who does not practice or claim to practice, nor lend his support to, any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every physician in the county to become a member.

Every applicant for membership in a component society must fill out and sign in duplicate the application blanks provided by the Society prescribing the necessary qualifications for membership.

Sec. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, and if the decision of the Council be questioned, an appeal shall be taken to the House of Delegates, whose decision in any case shall be final.

Sec. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts; but in case of every appeal, both as a Board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component society moves to another county in this State, his name, on request, shall be transferred, without cost, but upon assuming such financial obligation as shall be deemed proper by the component society to which transferred, to the roster of the county society into whose jurisdiction he moves.

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, provided that the consent of the society of the county in which such physician may reside be first obtained, and also the consent of the society which he desires to attend.

Sec. 10. At some meeting in advance of the Annual Session of this Society each county society shall elect a delegate or delegates, and an alternate or alternates, to represent it in the House of Delegates of this Society, in proportion of one delegate to each twenty-five members or major fraction thereof, and the Secretary of the county society shall send a list of such delegates to the Secretary of this Society, at least two weeks before the Annual Meeting.

Sec. 11. The Secretary of each component society shall keep a roster of its members and of the non-affiliated registered physicians of the county, on which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note and at once notify the State Secretary of any changes in the personnel of the profession, by death or by removal to or from the county, on blank forms to be furnished by the State Society therefor, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 12. The Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary of this Society before the first day of March of each year.

Sec. 13. Any county society which fails to pay its assessment or make the report required, on or before March 1st, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Society or of the House of Delegates during the annual session of that year, nor thereafter until such requirements have been met.

Sec. 14. In counties where it is not practicable to organize a County Medical Society, any member of the profession in said county may have the privilege of uniting with the society of an adjoining county, but such membership shall continue only during the time that no organized County Medical Society exists in that county. If, however, it is more convenient for a physician who lives in one county to attend the meetings of an adjoining component society, he may continue as

or become a member of such society, provided that jurisdiction be first waived by the society of the county in which such physician may reside.

Sec. 15. Any component society having its privileges suspended for two successive years shall be dropped from the list of component societies.

Sec. 16. If any County Medical Society shall refuse to pay its annual assessment, or to investigate a charge against any member, or to discipline such member if found guilty, or commit any act which may be derogatory to the honor of the medical profession, such society may have all its rights and privileges suspended, on a two-thirds vote of the Council or of the House of Delegates.

Sec. 17. No member of a component society shall be deprived of his membership unless by his own act, except by a three-fourths affirmative vote of all the members present at a regular meeting, and after an opportunity has been given for the accused to be heard in his own defense; but a member shall be dropped on the revocation of his certificate by the Board of Medical Examiners of California.

Sec. 18. No member shall be permitted to resign while he owes dues, or while he is under charges. Any member of a component society who is censured, suspended or expelled shall have the right to appeal to the Council of this Society. This appeal must be made within three months from date of the act of censure, suspension or expulsion. The decision of the Council shall be reported to the House of Delegates of the State Society at its next annual meeting, for final adjudication.

Sec. 19. When a member shall resign his membership in a component society, he shall thereby forfeit all right and title to any share in the privileges and property of the Medical Society of the State of California, or its subordinate divisions.

Sec. 20. Any County Society may, in its discretion, create a class of associate members; physicians not licensed to practice in this State, but connected with any of the State or Federal service or engaged in research, scientific or teaching work, shall be eligible to associate membership. Persons engaged professionally in branches of science allied to medicine but not holding the degree of Doctor of Medicine may be elected to associate membership.

Associate or honorary members of any county society are not members of this Society.

ARTICLE VIII.

SEALS.

Section 1. The seal of this Society shall be of the same size and design as the seal of the State of California. The marginal inscription shall have in the upper segment, "The Medical Society of the State of California"; in the lower segment, "1856 and 1902." It shall be in the custody of the Secretary of this Society.

ARTICLE IX.

MISCELLANEOUS.

Section 1. All papers read before the Society or any of the Sections shall become its property. Each paper shall be deposited with the Secretary when read.

Sec. 2. The deliberations of this Society shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

Sec. 3. The Principles of Medical Ethics of the American Medical Association are recommended in the conduct of members in their relations to each other and to the public.

Sec. 4. The fiscal year of the Society shall be from January 1st to December 31st, and all books and accounts shall be balanced and closed on the 31st day of December.

Sec. 5. For the purpose of determining the amount of the assessment upon each component society for the fiscal year, the Secretary of each component society shall file with the Secretary of the State Society, on or before the first day of March of each year, a statement of the number of members in good standing on the first day of January of such year, as provided in Article I, Section 3. Names of additional members may be transmitted to the Secretary of this Society at any time during the year, but all names transmitted shall be accompanied by the assessment to the State Society for that year. Any such new member joining a component county society at any time during the Society's fiscal year shall pay the regular annual assessment to be applied as such for the fiscal year in which he joins; provided that if such new member joins a component county society after July 1st, he shall pay only one-half the regular annual assessment for such fiscal year.

ARTICLE X.

AMENDMENT TO BY-LAWS.

Section 1. The House of Delegates is authorized to amend any Article or Section of the By-Laws by a three-fourths affirmative vote of the delegates present; provided, that such amendment has been submitted in writing and laid on the table for twenty-four hours previous to being voted upon.

Sec. 2. The Constitution and By-Laws heretofore governing this Society are hereby repealed, and this Constitution and By-Laws shall be in full force and effect immediately after it is declared duly adopted.

Upon motion of Jas. H. Parkinson, seconded by C. Van Zwalenburg, it was unanimously

Resolved, that the Amendments to the By-Laws be adopted as a whole and all in conflict be repealed.

Upon motion of Geo. H. Kress seconded by H. A. L. Ryfkogel it was unanimously

Resolved, that a war tax of $2.00 per capita instead of $1.00 (as recommended for adoption at the previous meeting) be levied on all the members of the Medical Society not in military service, in order to meet the deficit occasioned by military enrollment.

Upon motion it was regularly moved and seconded that reading the Minutes of the Second Session be idspensed with.

Upon motion it was regularly moved and seconded that the House of Delegates adjourn to meet at Hotel Potter, Santa Barbara, April, 1919.

THOSE REGISTERED AT THE FORTY-SEVENTH ANNUAL MEETING OF THE MEDICAL SOCIETY, STATE OF CALIFORNIA, DEL MONTE, APRIL, 1918.

A.

L. P. Adams, Oakland.
U. S. Abbott, Richmond.
H. E. Alderson, San Francisco.
W. C. Alvarez, San Francisco.
F. L. Anton, Los Angeles.
J. M. Armstrong, Alhambra.
J. R. Aeurn, Oakland.
Rachael Ash, San Francisco.

B.

J. H. Barbat, San Francisco.
G. M. Barrett, San Francisco.
E. I. Bartlett, San Francisco.
Hans Barkan, San Francisco.
E. E. Baumeister, Chico.
Eugene Benjamin, Sacramento.
P. K. Brown, San Francisco.
E. B. Boyes, Oakland.
John V. Barrow, Los Angeles.
M. D. Baker, San Jose.
Thos. O. Burger, San Diego.
E. E. Brinkerhoff, Oakland.
Adelaide Brown, San Francisco.
René Bine, San Francisco.
Mary H. Brown, Hollywood.
J. A. Bacher, San Francisco.
W. W. Boardman, San Francisco.
J. W. Beattie, Santa Clara.
R. E. Bering, San Francisco.
J. A. Beck, Salinas.
W. C. Billingsley, Hayward.
F. W. Birtch, San Francisco.
F. H. Bowles, Oakland.
L. M. Breed, Pasadena.
Wm. F. Blake, San Francisco.
G. A. Briggs, Sacramento.
Hugh J. Bolinger, Lodi.
J. M. Brown, Los Angeles.
M. P. Burnham, San Francisco.
E. Lee Burch, Watsonville.
J. P. Bushong (guest), Oakland.

C.

Paul M. Covington, San Diego.
W. E. Carter, Los Angeles.
A. B. Cecil, Los Angeles.
F. B. Carpenter, San Francisco.
W. A. Clark, Oakland.
B. F. Church, Redlands.
J. C. Crawford, Orange.
W. W. Crawford, San Diego.
George L. Cole, Los Angeles.
Asa W. Collins, San Francisco.
Titian Coffey, Los Angeles.
A. F. Cowden, Santa Cruz.
Roland Cummings, Los Angeles.
C. E. Curdts, Oakland.
Daniel Crosby, Oakland.
C. L. Curtiss, Redlands.

D.

W. B. Dakin, Los Angeles.
Louis C. Deane, San Francisco.
F. E. Detling, Los Angeles.
Clarence A. De Puy, Oakland.
Jas. R. Dillon, San Francisco.
G. P. Dillon, Sacramento.
S. W. Dowling, Santa Cruz.
Wm. Duffield, Los Angeles.
Rex Duncan, Los Angeles.
C. A. Dukes, Oakland.

E.

G. E. Ebright, San Francisco.
T. C. Edwards, Salinas.
H. B. Ellis, Los Angeles.
L. A. Enge (guest), San Francisco.
George H. Evans, San Francisco.
Edw. N. Ewer, Oakland.

F.

W. H. Fetherston (guest), San Francisco.
W. S. Franklin, San Francisco.
J. R. French, Los Angeles.
C. M. Fox, San Diego.
Otto G. Freyermuth, San Francisco.
J. F. Friesen, Los Angeles.

G.

A. Galbraith, Oakland.
H. W. Gibbons, San Francisco.
M. R. Gibbons, San Francisco.
Carl M. Gibson, Palto Alto.
John H. Graves, San Francisco.
A. S. Granger, Los Angeles.
H. B. Graham, San Francisco.
N. J. Gottbrath, San Francisco.
E. T. Gould, Sonora.
A. B. Grosse, San Francisco.
F. J. Gundry, Bakersfield.
Herbert Gunn, San Francisco.

H.

David Hadden, Oakland.
G. J. Hall, Hilts.
O. D. Hamlin, Oakland.
F. A. Hamlin, Bakersfield.
Jo. Hamliton, Oakland.
E. W. Hanlon, Los Angeles.
Hill Hastings, Los Angeles.
George A. Hare, Fresno.
P. F. Haskell, Artesia.
W. H. C. Hatteroth, Oakland.
Henry Harris, San Francisco.
R. W. Harvey, San Francisco.
Carl L. Hoag, San Francisco.
H. O. Howitt, San Rafael.
Florence M. Holsclaw, San Francisco.
H. P. Hill, San Francisco.
Frank Hinman, San Francisco.
A. W. Hoisholt, Napa.
W. L. Huggins, Los Angeles.
Vard H. Hulen, San Francisco.
T. W. Huntington, San Francisco.
Samuel H. Hurwitz, San Francisco.
Sol Hyman, San Francisco.

J.

L. C. Jacobs, San Francisco.
P. N. Jacobson, Turlock.
Josephine A. Jackson, Pasadena.
J. W. James, Sacramento.
Edward C. Johnson (guest), San Francisco.
C. B. Jones, Sacramento.
Ellis Jones, Los Angeles.
H. A. Johnston, Anaheim.
P. A. Jordan, San Jose.

K.

E. E. Kelly, Pomona.
A. S. Kelly, Oakland.
C. G. Kenyon, San Francisco.
E. W. Kent (guest), San Francisco.
Maurice Kahn, Los Angeles.
Joseph H. Kech, Palo Alto.
F. H. Koepke, Watsonville.
G. H. Kress, Los Angeles.
H. A. Kiefer, Los Angeles.
Joseph M. King, Los Angeles.
John C. King, Banning.
E. V. Knapp, San Francisco.
R. B. Knight, Stockton.
Henry J. Kreutzman, San Francisco.
Martin Krotoszyner, San Francisco.
C. W. Kohl (guest), San Francisco.
J. H. Kuser, San Rafael.

L.

Lovell Langstroth, San Francisco.
W. M. Lewis, Los Angeles.
Mary H. Layman, San Francisco.
Robt. T. Legge, Berkeley.
Bert E. Loehr, San Jose.
A. S. Lobingier, Los Angeles.
Hans Lisser, San Francisco.
H. H. Lissner, Los Angeles.
F. M. Loomis, Oakland.

Frank Lynch, San Francisco.
W. R. Livingston, Oxnard.
G. D. Lyman, San Francisco.
L. R. Luton, Santa Barbara.

M.

H. R. Martin, Riverside
F. C. E. Mattison, Pasadena.
A. H. Mays, Sausalito.
Alice F. Maxwell, San Francisco.
J. J. Medros, Haywards.
H. G. Mehrtens, San Francisco.
Lewis Michelson, San Francisco.
Robt. W. Miller, Los Angeles.
Martin Molony, San Francisco.
A. W. Morton, San Francisco.
G. G. Moseley, San Francisco.
Howard Morrow, San Francisco.
W. Moore, San Francisco.
W. E. Musgrave, San Francisco.
M. McAulay, Monterey.
Jas. J. McNamara (guest), San Francisco.
Thos. J. McCoy, Los Angeles.
H. C. McClenahan, San Francisco.
T. C. McCleave, Oakland.
H. Y. McNaught, San Francisco.
J. H. McKellar, Los Angeles.
Lyle G. McNeile, Los Angeles.

N.

J. C. Neel, San Francisco.
H. P. Newman, San Diego.
E. A. Newton, Los Angeles.
J. C. E. Nielsen, San Diego.
A. N. Nittler, Santa Cruz.
Dr. Pauline Nusbaumer, Oakland.

O.

F. J. Old, Los Angeles.
Roderic O'Connor, Oakland.
F. K. Orella, San Francisco.
Daniel E. Osborne, St. Helena.
E. E. Ostrom, Loomis.

P.

Jas. H. Parkinson, Camp Fremont.
E. M. Pallette, Los Angeles.
Garth Parker, Salinas.
H. F. Peart (Attorney), San Francisco.
F. C. Peirsol, Mendocino.
P. T. Phillips, Santa Cruz.
R. J. Pickard, San Diego.
P. H. Pierson, San Francisco.
Lulu Hunt Peters, Los Angeles.
Kaspar Pischel, San Francisco.
Robt. Pollock, San Diego.
C. B. Pinkham, San Francisco.
Saxton T. Pope, San Francisco.
Langley Porter, San Francisco.
N. B. Potter, Santa Barbara.
H. D'Arcy Power, San Francisco.
F. M. Pottenger, Los Angeles.
M. E. Purcell, Oakland.
H. A. Putnam, Banning.

R.

G. G. Reinle, Oakland.
R. L. Rigdon, San Francisco.
Arthur Ritter (guest), San Francisco.
A. M. Ritchie, Pacific Grove.
Emmett Rixford, San Francisco.
A. R. Rogers, Los Angeles.
L. M. Rose, Santa Clara.
H. A. Rosenkranz, Los Angeles.
R. F. Rooney, Auburn.
Leon J. Roth, Los Angeles.
A. H. Rowe, Oakland.
Hurbert N. Rowell, Berkeley.
L. M. Ryan, Banning.
L. R. Ryan, Santa Barbara.
H. A. L. Ryfkogel, San Francisco.

S.

Philip M. Savage, San Bernardino.
E. H. Schneider, Los Angeles.
Walter F. Schaller, San Francisco.
R. J. Scott, Jr., Los Angeles.
H. H. Sherk, Pasadena.
A. B. Spalding, San Francisco.
F. M. Shook, Oakland.
Wm. Simpson, San Jose.
A. J. Sanderson, Berkeley.
George M. Starbird, Soledad.
George A. Spencer, Sacramento.
G. L. Sobey, Paso Robles.
E. C. Sewall, San Francisco.
J. M. Shannon, Oakland.
S. E. Simmons, Sacramento.
E. D. Shortlidge, San Francisco.
J. A. Sperry, San Francisco.
Albert Soiland, Los Angeles.
F. Stabel, Redding.
Harlan Shoemaker, Los Angeles.
Harry M. Sherman, San Francisco.
C. C. Snyder, Los Angeles.
E. R. Sill, Oakland.
S. E. Simons, Sacramento.
Fred A. Speik, Los Angeles.
Ellen A. Stadtmuller, San Francisco.
Wm. E. Stevens, San Francisco.
C. S. Stoddard, Santa Barbara.
W. H. Streitmann, Oakland.
B. F. Surryhne, Modesto.
A. M. Smith, Oakland.
Dudley Smith, Alameda.
L. L. Stanley, San Quentin.
T. A. Stoddard, San Francisco.
R. T. Stratton, Oakland.
J. F. Sullivan, San Francisco.

T.

Wm. A. Taltavall, Redlands.
W. L. Teaby, Monterey.
C. P. Thomas, Los Angeles.
Jerome B. Thomas, Palo Alto.
E. B. Todd, San Francisco.

V.

C. Van Zwalenburg, Riverside.
V. G. Vecki, San Francisco.
S. N. Vendel, Hayward.
Edw. Von Adelung, Oakland.
Harry M. Voorhees, Los Angeles.
Wm. C. Voorsanger, San Francisco.

W.

A. W. Walker, Riverside.
G. W. Walker, Fresno.
Ethel M. Watters, San Francisco.
James Watkins, San Francisco.
Clyde Wayland, Watsonville.
M. W. Ward, Woodland.
H. C. Warren, Belmont.
George S. Wells, Santa Barbara.
Wm. A. Weldon, San Francisco.
Cullen F. Welty, San Francisco.
C. M. White, Visalia.
W. Le Moyne Wills, Los Angeles.
Emma K. Willits, San Francisco.
Geo. H. Willcutt, San Francisco.
Wm. P. Willard, San Francisco.
Ralph Williams, Los Angeles.
O. O. Witherbee, Los Angeles.
D. S. Woodard, Watsonville.
W. W. Wymore, San Francisco.

Y.

John C. Yates, San Diego.

Z.

A. H. Zeiler, Los Angeles.

Book Reviews

Technique of Operations on the Bones, Joints, Muscles and Tendons. By Robert Soutter. N. Y.: Macmillan, 1917. Price, $4.50.

This is a good, practical book. The preface says, "The work contains only carefully tried-out methods which cover operations on the bones, joints, muscles and tendons, including muscle transplantations together with all the common

operations for the correction of deformities and some of the less usual ones. It is intended as a practical guide for advanced students, and for the surgeon who desires to select one of several tried-out methods for any special case.

"I have endeavored to give the important details of all procedures in order to freshen the surgeon's memory before operating. . . .

"The operative procedures, useful in infantile paralysis, are dealt with at length and the tried-out methods are here recommended rather than every possible operation."

There are many practical hints on the use of plaster of Paris, directions for pre- and post-operative care, for pre-operative arrangements and adjustment of apparatus and descriptions of orthopedic manipulations.

The illustrations are good in the main, but some, e. g., those of the author's operation for hip-contraction, are so tiny as to be unclear.

The book will be a vade-mecum for many an interne; it should be of interest and value to anyone doing orthopedic surgery. L. E.

The Surgical Clinics of Chicago, Volume II, Number I (February, 1918). Octavo of 226 pages, 73 illustrations. Philadelphia and London: W. B. Saunders Company. 1918, Published Bi-Monthly. Price per year: Paper, $10.00; Cloth, $14.00.

Contents: E. W. Andrews and C. L. Mix: Duodenal ulcer. A. J. Ochsner: Basal-celled epithelioma of neck. Repair of post-operative ventral hernia. Sarcoma of thigh with metastases in vas deferentia. A. E. Halstead: Meningeal cysts. A. D. Bevan: Choledochoplasty. Gallstone ileus. Ruptured extrauterine pregnancy. Benign stricture of rectum. L. L. McArthur: Operative clinic demonstrating practical points in nephrectomy and resection of colon. Kellogg Speed: Gunshots of head. T. J. Watkins: Radium in gynecology. D. N. Eisendrath: Ureteral strictures. R. T. Vaughan: Acutely strangulated intra-abdominal tumors. W. Hessert: Arthroplasty of knee. D. C. Straus: Acute ileus caused by appendix adherent to right ovary. C. Beck: Conservative surgery in children. Extensive laceration forearm and hand with decollation of integument, laceration muscles, fracture of bones. Recovery with perfect function. F. G. Dyas: Local anesthesia in major surgery. Diverticulum of urinary bladder. C. Davison: Successful repair fractured femoral neck. Removal exostosis internal condyle femur. C. A. Parker: Non-operative clinic illustrating therapeutic measures employed in orthopedic conditions (13 cases). J. Ridlon: Difficulties in diagnosis of hip disease.

A Clinical Manual of Mental Diseases. By Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases Jefferson Medical College, Philadelphia. Second Edition, Revised. Octavo of 497 pages. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $3.50 net.

The publication of a second edition of this excellent text-book affords the reviewer an opportunity of calling the attention of the profession to this well-arranged manual. For simple, logical classification and for well-expressed presentation of the subject, this work stands in pleasant contrast to many others on the same subject. Especially for the beginner in psychiatry is such a book well calculated to induct him into this complicated field with a minimum of confusion and with a substantial basis for deeper study. The practitioner, in his consideration of the nervously afflicted that he has to deal with, will find much of value in this manual, much that will make his understanding of the needs of these cases more sympathetic and more helpful.

G. H. T.

Principles of Surgical Nursing. A Guide to Modern Surgical Technic. By Frederick C. Warnshuis, M. D., F. A. C. S., Visiting Surgeon, Butterworth Hospital, Grand Rapids, Michigan, Chief Surgeon Pere Marquette Railway. Octavo of 277 pages with 255 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $2.50 net.

This is a pretentious book, lavishly illustrated. It contains little information that a nurse will find useful to refer to or to read more than once. The half-tone illustrations are pleasing, but line drawings would be clearer; about one-third to one-half of them are quite superfluous. Yet the book is so pretty that it will probably sell. L. E.

The Way Out of War. Notes on the Biology of the Subject. By Robert T. Morris. 166 pages. New York: Doubleday, Page & Co., 1918.

A quite incoherent and nystagmic attempt at explaining by evolutionary principles war and the rise and fall of nations. Here is a sample sentence: "In order to carry some sort of plain picture of a complex process we postulate that the ionic atomic impact from a stimulated brain cell upon the ether gives rise to an ether impulse which on the rebound possesses potency for stimulation of the brain cell." (p. 24.) L. E.

Diseases of the Skin. By Milton B. Hartzell, A. M., M. D., LL. D. Published by J. B. Lippincott & Co. Philadelphia and London. 1917.

Hartzell has written an excellent treatise on dermatology and illustrated it with carefully selected black and white and colored prints.

It is difficult to select any specific subject which the author has handled best, as he has treated the whole so well, including all the up-to-date knowledge of dermatology and syphilis. It is therefore complete as a text-book. The reviewer can highly recommend it for both the general practitioner and the specialist in skin diseases. G. D. C.

The American Medical Council on Pharmacy and Chemistry, 1917, published by the American Medical Association, 535 North Dearborn Street, Chicago, Illinois, is a most valuable book to the practicing physician. S. P.

New and Non-Official Remedies, 1918, published by the American Medical Association, 535 North Dearborn Street, Chicago, Illinois, contains data with which every physician should familiarize himself. Price, $1.00. S. P.

Correspondence

FROM DR. R. H. HUNT.

U. S. S. "Corsair," May 12, 1918.

My dear Doctor Beckman:

Well, as per agreement, I will drop you a line to let you know that I have changed my address, not a great change but enough to make note of. While over here I went aboard a very trim looking yacht and had a chat with the medical officer aboard. During our conversation something was said about trading ships, well I was willing and he was anxious so I told him to go ahead and see if he could work it. Much to my surprise he did and so here I am and I presume he is back in the States by now.

The "Corsair" belonged to Mr. J. P. Morgan and I am very much obliged to him for having such a comfortable large and fast ship and besides that it looks very good. Mr. Censor, a very, very nice fellow, does not want me to tell you the kind of work that we are doing so I will not cross him by saying other than that we have work to do which has its joys, thrills, dangers and leisure. We get a chance to work on dry land once in a

while and I assure you that this is a very pretty time of the year over here. The fields of red clover are at their best and the trees are well out and I do not suppose it will be long before we will be having the fruits of the season.

The work is booming here and every time we come in we can see the changes that have taken place since we left. The American Forces are putting in a lot of work over here. It seems that we cannot learn to use the facilities that they have over here, though the French have made them do for a long time. The first thing that everyone does when they see a freight train and engine is to say: "Toot, toot," for they do look so much like a toy. The French are showing some difficulty in understanding our methods and I fear that they do not fully appreciate what we have done already, much of it seems so useless to them. I think though in a very short time that we will be having them look at us in the right light. The peasants who are in the towns seem to take the Amex soldier as a sort of a tourist who is out for a good time, they cannot understand the boys who sky-lark and go to battle all the same day.

I have visited some of the hospitals on shore here and those located with camps have about the same old thing to do, i. e., preventive and prophylactic medicine. I visited Cabot's Hospital Base, they are just about getting into good working order and have a big place. At present there are more medical cases there than anything else. They are quite a way from trouble but I suppose train service will make them closer when things get going as they no doubt will before long.

With very good wishes, I am,

Yours truly,

R. H. HUNT.

MEDICAL WOMEN'S WAR SERVICE.

To the Editor:

The American Women's Hospitals represent the national organization of medical women in the United States, to which over 2000 medical women are registered for war service. Half this number are available at a moment's notice for foreign service.

The distressing condition in the allied countries convinces us that the work is essential. When we realize the diabolical military idea of the Huns, who by imperial edict compel the repopulation of their own country, while at the same time they are in every manner devitalizing the inhabitants of France and Belgium through starvation, deprivation and all sorts of atrocities and depredations which civilization cannot countenance, their crude and cruel attempts to prevent the perpetuation of other nations by inoculating their prisoners with germs of T. B. and syphilis, and the mutilation of innocent children,—then it behooves us, the people of America, to foster the mothers and children of France, Belgium and Servia, and by our money and efforts strive to make the inhabitants of these war-ridden countries strong physically and mentally.

We are told by eye witnesses of the thousands of French and Belgian children who are driven from Germany by way of Switzerland, when they are no longer able to work, and half starving and diseased are herded into France to be fed and cared for. These horrible conditions are beyond belief.

Through the efforts of our medical women our organization has obtained three ambulances and one motor laboratory fully equipped, which has been sent to Servia. Besides sending many surgical supplies and instruments, ether, etc.

Sixty-five of the women physicians have already been sent to France to do civilian relief work. Two Los Angeles women have recently left for this work, and they write us that we cannot conceive of the terrible conditions of poverty and privation which exist there. They tell us we must work, and work, and work still more to send aid to these stricken people.

Our plan is to interest all the lay people in our work, and to raise money to equip and support in France, Belgium and Servia hospital units with outlying dispensaries and to do civilian relief work in the allied countries. Also our American women of the American Women's Hospitals are organized to aid in caring for the dependents of the soldiers and sailors at home.

A few weeks ago there was put on in New York City a campaign to raise $200,000 for this work; $250,000 was raised at that time, which will go towards equipping our hospital unit. Realizing the success that this work has reached by this great appeal we in the Los Angeles District are putting on an open campaign to raise the sum of $50,000 for this work. This is a small amount when we realize the great need and the poverty that exists over there while we are practically all of us living in luxury.

Yours very truly,

ETTA GRAY, M. D.,

State Chairman, American Women's Hospitals.

May 29, 1918,
Los Angeles.

County Societies

The Los Angeles County Medical Association met on April 9, 1918, at 8 P. M., in the Auditorium of the old Los Angeles Normal School, at Fifth and Olive Streets.

It was a patriotic meeting, called at the request of the Government.

This is a special meeting, called for the purpose of hearing Major D. Jump, who comes with a special message direct from the office of the Surgeon-General, and our Government at Washington. The meeting is especially intended for the members of the Los Angeles County Medical Association, the Los Angeles County Dental Association, the Los Angeles County Pharmaceutical Association, and the Los Angeles County Nurses' Association.

All physicians, dentists, pharmacists, and nurses, and members of their families and friends and clients, were cordially invited to be present.

The audience joined the leaders in patriotic songs with exceptional enthusiasm.

Dr. William Duffield, president of the Society, opened the meeting and requested Dr. E. Avery Newton, chairman of the committee on Red Cross Work, to preside.

The regular meeting of the Los Angeles County Medical Association took place in Hamburger's Cafe, May 2d, at 8:15 p. m., Dr. Duffield presided.

A vote of thanks was extended by the Society to Congressman Osborn for his recommendation of Dr. D. D. Lucy for the Los Angeles Reserve Corps.

Dr. Walter M. Dickie's subject was "Venereal Phases of the War Social Service."

Dr. Duffield introduced Dr. Milbank Johnson saying that he stood in the front rank in altruistic work, and that he has done much good.

Dr. Milbank Johnson, member of the Executive Committee of the California Military Welfare Commission, spoke on "The Sociological Work" of that commission.

In August of 1917 the Governor at the request of the Secretaries of War and Navy created the California Military Welfare Commission consisting of seventeen ladies and gentlemen meeting in

various places throughout the State. The object is to reduce prostitution, prevent the sale of alcohol to soldiers and sailors, stimulate and foster recreation of a healthy kind.

May 16, 1918, meeting of the Los Angeles County Medical Association in the Hamburger Building, at 8:15 p. m.

Dr. Duffield called the meeting to order. Dr. George H. Kress proposed that the Society go to the top of Mount Lowe for the last meeting before vacation, the first Tuesday in July, to have a banquet or informal dinner.

Dr. Duffield said that it would be an inexpensive trip. Dr. Thomas moved to carry out that program. The motion was unanimously carried.

Captain M. M. Cloud reported for the month of May.

Dr. Duffield said that there are fourteen teams of five or more members on the Membership Committee. We need members both for fellowship and financial support. The Society is about $2000 in arrears, the same as at the beginning of the year. The advantages are so numerous that every doctor ought to become a member. There are many old men, some retired, and women doctors who are acceptable. Each member ought to get one or more, and then our deficit would be liquidated. The Barlow Medical Library is used a great deal and has good material though we cannot get new books, the journals are on hand. Donations of $5 each will give pleasure. At a meeting of the State Secretaries of the A. M. A., I proposed a committee to anticipate a possible draft. Broadminded men should be appointed to examine why doctors do not enlist in the Medical Reserve Corps. I met with some opposition but with the authority of the Council, I'll go ahead. Dr. MacGowan at first opposed, but thinks it all right now. It gives every man a chance to go before the committee. The data can then be utilized to stimulate those below 38 years of age, by having older men go. The younger men are wanted.

Dr. William A. Edwards of the Physicians and Surgeons Second Liberty Bond campaign said that $178,000 was collected from the profession. Five to seven million men more are needed with 80,000 physicians. Twenty thousand are to make up for retirements, diseases and casualties. You will receive cards for subscriptions to the second Red Cross War Fund. Send any sums from 10 cents up. A letter from Dr. W. W. Richardson was received two weeks ago. He is in Philadelphia and said:

"You may use my letter, although I may have expressed myself too strong. There is no news about our going, but arrangements have been made to go soon. Taft believes that there will be four or five years more of war. I heard comments about our period of inactivity. The critics say that there cannot be much need for doctors if they have to wait. Two base hospital units are needed for the Navy. San Francisco was selected and the other in Philadelphia is to be sent soon. Our time will come, we are needed. A hospital building is being sought. They are scarce. Negotiations are pending to secure a hospital for many patients, and we are to have important places. We requested that some senior officers be sent in advance. Dr. Murphy explained to Admiral Benson that we must be in readiness and must not be separated. Our wait was due to existing conditions. This has nothing to do with the Army. I will go when I am needed and the Governor is to decide when we are needed. Now we are not ready but we at least try to do our duty. A slacker is beneath contempt and a pro-German ought to be ostracized."

Dr. Sherk said that the Volunteer Medical Service Corps was started in Chicago last fall. The organization is under the management of the National Council of Defense and the Surgeon General of the Army. Those over 55 years old are eligible and also those who for other reasons are not accepted in the Medical Reserve Corps. A doctor over 55 is excused from going if he is essential in a school as teacher, or if the public needs him as health officer, or if in charge of an institution, he is the only remaining man, or has to look after the civic population, so too a man with sick wife or children or with too many depending upon him, is exempt. Another with dependents but having an income to take care of them would have to go. Women physicians would be included. The object is emergency service. Of military and civic services, most are in civilian life, but as more go to the front, the members of the Volunteer Medical Service Corps will have to take their place. They will then have their opportunity, some in cantonments, some limited to service in this country or they may have to go to the front. The names will be on file in Washington. All men will be put where the Government can use them. To put these men in a proper place before the public and not be classed as slackers, and we do not want any one to think us such, this organization will put you into a corps attached to the Medical Reserve Corps. You will not get a uniform or a salary, but a badge. A slacker cannot get an insignia of the Volunteer Medical Reserve Corps. A man of bad character, lack of scientific ability or a lack of desire to get in cannot get uniform or insignia, but is a slacker.

The regular scientific program was arranged by Dr. Shuemaker.

Dr. Clarence A. Johnson's subject was on "The Result of the Schick Test for Diphtheria Susceptibility."

Personals.

Dr. James J. Choate, aged 66 years, died June 1 of heart trouble at the house of a patient. He served as Major-General during the Spanish-American war and was police surgeon in this city from 1893 to 1895.

Lieut. G. S. Porter, physician of Los Angeles, left June 1 for Portland, Oregon, to report for duty in the Medical Corps attached to the Air Service Division of the U. S. Army.

Capt. H. K. Berkley Takes Bride at Santa Monica.

Capt. Berkley of the Medical Corps of the U. S. Army, and son of Major S. L. Berkley of Santa Monica, was married to Miss Martha Westbrook, daughter of Mr. and Mrs. John R. Westbrook of 505 Georgina avenue, at the Augustine church, Santa Monica, on the morning of May 8. Dr. Berkley is stationed at Camp Kearny.

Dr. W. D. Bishop of the Soldiers' Home medical staff has been ordered to report for army service at San Francisco, from where he will go to the base hospital at Camp Kearny. The doctor is the fifth physician called from the Soldiers' Home hospital. The board of managers are finding it difficult to keep the hospital staff full to its quota.

Dr. Edward C. Folsom, one of the first trustees of Santa Monica, died May 10. The City Council adopted resolutions of respect and appreciation for his services. He had practiced medicine in Santa Monica for the past forty years. He is survived by a daughter, Mrs. R. T. Lanterman, and a son, Dr. Walter Folsom.

Dr. David Charles Davies, for twenty years a resident of Pasadena, died at the home of his daughter, Mrs. Lewis H. Mitchell, May 13, at the age of eighty-five. He was U. S. Consul at Swansea, Wales, during President Cleveland's administration, after practicing medicine for twenty-five years in Columbus, Wis. He is survived by his daughter, Mrs. Mitchell, and five grandchildren.

Godspeed to Dr. Vera Placida Gardner.

Dr. Vera Placida Gardner, Los Angeles City

Bacteriologist and physician, who will soon leave for France as a member of the Stanford unit, was given a farewell reception at the Wolfe & Doerr studio by a large gathering of women friends, professional associates, nurses and Red Cross workers. Dr. Gardner was presented with a handsome steamer rug and shawl strap with gold nameplate by Mrs. Kate D. Johns, inspector of hygiene and home nursing at the Los Angeles Red Cross Chapter House.

Dr. Gardner will be accompanied by her sister, Miss Margaret Gardner, and fifteen women graduates of Stanford University. The members of the unit are from the ranks of lawyers, physicians, social workers and others to do general relief work.

Surgeon-General Ryerson, the father of the Canadian Red Cross, of Canada, having seen twenty-one months of active service in France as Inspector-General of Red Cross work, arrived May 22 in Los Angeles as volunteer speaker for the second war fund drive of the American Red Cross. His wife was lost on the Lusitania and his daughter distinguished herself on that occasion so that King George decorated her for exceptional bravery and resourcefulness. One son is in command of an artillery unit in France, the other is captain of engineers, and the third, as captain in the 3rd Canadian Regiment, lost his life in France. General Ryerson of Toronto founded the Canadian Red Cross 23 years ago.

Second Health Tests.

All men rejected by the exemption boards of the United States because of physical disability are to be recalled before the boards for another examination, according to Edythe L. M. Tate Thompson, director of the Bureau of Tuberculosis, California State Board of Health. She says California has fewer tubercular men in camps than other Western States.

State Will Help Fight Mosquitoes.

Governor Stephens conferred with Los Angeles sanitary officials, the Los Angeles Health and Sanitation Committee. Dr. L. M. Powers of Los Angeles Health and Dr. Taylor of Long Beach Health Departments presented data for the Governor and suggested that the State stand part of the expense of exterminating moquitoes in the territory affected. The Governor assured the committee that the State would willingly co-operate and do its share toward mitigating the nuisance. At present the expense would fall upon Los Angeles and Long Beach jointly, as the lands affected are partly in each city. Communications from Prof. Gillespie and Prof. Quayle, State Entomologist, offered their services to the movement free of charge.

A force of men, supervised by Prof. Henry Quayle, began draining the marshes near Zine Station. The sum of $9000 has been pledged by the State, city of Los Angeles and Long Beach for the extermination of the mosquitoes. Drainage and the spreading of oil will be the methods employed. Dr. Philip Herriges, P. W. Porter and A. Amdsen will assist. The mosquitoes are a menace to the shipbuilding and fishing industries. Dr. R. L. Taylor, health officer, will take steps to do the work within Long Beach.

Health Study.

The Public Health Department of the University of California will give courses in its summer session beginning June 24, until August 3 in the Los Angeles High School building, under the supervision of Dr. John Nivison Force. His assistants will be Cecilia Evans, Marguerite Spiers, Annette Stuart and Dr. J. L. Pomeroy. Bulletins may be had at room 417 Union League building.

Sanitation Lectures.

The University of California Extension Division has arranged for a course of fifteen lectures on Army Sanitation, arranged particularly for selective service registrants, to be delivered by Dr. J. L. Pomeroy, county health physician. The first meeting of the class was held May 28. Notice of the formation of the class has been sent to local exemption boards.

Receiving Hospital Head.

Dr. G. C. Stadfield was elected May 10, by the City Council, to the office of chief surgeon at the Receiving Hospital, to take the place of Dr. John P. Gilmer, whose resignation was accepted to take effect on June 15.

Mayor Asks Los Angeles to Buy Sanitarium.

Mayor Woodman will recommend the purchase of El Retiro, a sanitarium with thirty cottages and other buildings, for a women's detention home and reform school. The buildings and ten acres of land can be purchased for $17,000, of which but $6000 in cash must be paid out of the present year's budget. He thinks it can be made self-supporting by placing the women inmates at work making garments.

The establishment, with the men's detention farm, will make it unnecessary to spend $400,000 for a new jail until after the war.

The members of the City Council have called upon the Social Service Commission to get an idea as to operating cost for one year. President Farmer of the Council said that Dr. Milbank Johnson suggested to the members of the Council a printing plant, but it was questioned whether women could master printing in six months, the limit of time the police court can sentence them.

Moron Institution Sites.

Four sites are considered by the State Board of Control for the location of the State institution for the moron class of feeble-minded children of Southern California, two in San Diego County, one in Santa Barbara and one in Orange County. Mrs. J. Powers Flint of the Pacific Colony Board conferred with State officials. The sum of $300,000 has been appropriated for the purchase of site and buildings. Two thousand children are to be provided with an institution on 800 acres.

MENDOCINO COUNTY.

Report of proceedings of the regular meeting held in the office of Dr. O. H. Beckman, Fort Bragg, on Saturday evening, May 18th, 1918.

Dr. A. C. Huntley, acting as president, called the meeting to order. Members present: Drs. A. C. Huntley, H. Peddicord, L. C. Gregory, F. C. Peirsol and O. H. Beckman.

A questionnaire has been sent out since the meeting; we hope for prompt answers.

A letter from Wm. Pilsbury to a member regarding the Industrial Accident Commission's new law and its application.

Dr. Huntley made the suggestion that we invite the dentists of Mendocino county to become associate members of this Society.

Program: Dr. Beekman read a paper. "The Mendocino Coast and County as a Health Resort." This paper points out the special fitness of this coast and climate for the recuperation of health and strength, be the cause whatsoever (excepting pulmonary and allied). It also brought to notice its unsurpassing suitability for Uncle Sam and his medical branch for recuperative purposes and the training of convalescents. It invited sufferers from malarial regions to investigate this coast.

Dr. Peddicord gave the history of a recent and very interesting case of nephritis.

Dr. Piersol reported an unusual case of an eighteen-months-old child swallowing and passing through its alimentary canal stones, a string and a nail. The exhibit made quite a handful.

Adjourned for coffee and Hooverized bread, etc.

Our Volunteers: Asst. Surgeon R. H. Hunt,

U. S. N. R. F., is on the U. S. S. "Corsair." Capt. H. H. Wolfe, at last account, still in charge of Infirmary, Camp Crane, Allentown, Pa. Capt. R. A. Babcock, at last account, training under experts of the S. F. Military Medical Post-Graduate Department.

SAN JOAQUIN COUNTY.

The regular meeting of the San Joaquin Medical Society was held on Friday evening, May 24, at the Chamber of Commerce, the Vice-President, Dr. Linwood Dozier, presiding. Those present were: Drs. R. R. Hammond, L. Dozier, Mary Taylor, J. E. Nelson, H. J. Bolinger, E. B. Todd, D. R. Ray, S. R. Arthur, B. F. Walker, J. T. Davison, W. T. McNeil, F. J. Conzelman, W. J. Backus, R. B. Knight, F. P. Clark, C. D. Holliger, S. P. Tuggle, W. F. Priestly, C. F. English, C. L. Six, and D. R. Powell with Dr. Boehmer of Lodi, Dr. Dodge of Stockton, Dr. Walter Alvarez, and Dr. Frank Hinman of San Francisco as guests.

The paper of the evening was presented by Dr. Frank Hinman from San Francisco, whose topic was, "Diagnosis of some conditions producing frequency and difficulty of Urination." The doctor's paper was very complete and thoroughly interesting and illustrated by lantern slides which demonstrated not only anatomical facts but also showing pathological conditions. In addition to the lantern slides the doctor demonstrated several specimens. After a general discussion the meeting adjourned.

STANISLAUS COUNTY.

At a meeting of the Stanislaus County Medical Society, held at the Modesto Hotel, Modesto, on the evening of the fourteenth of June, the following gentlemen signed applications for commissions in the Medical Officers' Reserve Corps, and had their examinations: Ira J. Clark, Fred R. De Lappe, John L. Hennemuth, Peter N. Jacobson, Benjamin F. Surryhne, Irving B. Thompson, Frank L. Bateman, Elwin F. Reamer, J. C. Robertson, J. J. Knowlton.

TULARE COUNTY.

The regular meeting of the Tulare County Medical Society was held at Visalia June 12. Dr. C. D. Sweet, of Fresno, gave a talk on "Infant Feeding," which included many points of practical value in other pediatric lines, as well as suggestion for ante-partum care of mothers. A general discussion of the subject in its various aspects followed.

Reports from the Committee on Sanatorium for Tuberculosis, for Kings and Tulare Counties was presented by Dr. Melvin and discussed.

The shortage of nurses and need for systematic listing of all practical nurses in the county was noted. Adjourned to meet in September.

Military News

MEDICAL OFFICERS OF THE TWELFTH NAVAL DISTRICT, SAN FRANCISCO, CALIFORNIA.

Surgeons.

Baker, M. W.
Crispin, E. L.
Hewlett, A. W.
Smith, Rea
Stillman, Stanley

Past Assistant Surgeons.

Ashmore, Frank
Barkan, Hans
Barnett, G. D.
Bollor, Phil
Bryant, F. J.—P. A.
Charlton, A. T.
Charlton, C. F.
Chamberlin, H. B.
Clark, V. C.
Cowan, J. R.
Gilman, P. K.
Hughes, F. A.
Inman, T. C.
Jacobs, J., U. S. N.
Lingenfelter, G. P.
Miller, F. W.
McNulty, A. H.
Milligan, C. F.
Minaker, A. J.
Morton, L. D.
Richardson, W. W.
Spalding, O. B.
Tebbe, W. B.
Thorne, I. W.
Tupper, E. B.
Vogel, A. B.
Wier, T. F.
Williams, T. E.
Stearns, A. W.
Jacobs, J., U. S. N.

Assistant Surgeons.

Adams, J. R.
Ainslie, C. A., U. S. N.
Andrus, C. L., U. S. N.
Baldwin, Grove
Behlow, W. W., U. S. N.
Butler, E. W.
Brady, E. J.
Avery, L. G.
Callanan, J. L., U. S. N.
Chamberlin, W. E.
Christiansen, R. C., U. S. N.
Cohn, M. L.
Cook, E. P.
Conroy, D.
Cummins, F. A.
Courtenay, G. T.
Craig, J. B.
Crossman, J. W.
Davis, B. F.
Dickson, A. R.
Donnel, R. H.
Dorn, N. F.
Duncan, H. B.
Dunn, T. B.
Gilbert, R. A., U. S. N.
Goettach, A.
Goss, O. S.
Galbraith, F. B., U. S. N.
Gerdine, L.
Gilmer, J. P.
Guinan, E. R.
Foye, F. A.
Hammond, T. V.
Hare, H. P., U. S. N.
Harvey, J. E., U. S. N.
Halzberg, H. L.
Horner, W. D.
Hubbard, H. D.
Hunt, R. H.
Hogan, J. J.
Horton, J. C.
Hosmer, C. M.
Irvine, R. S.
Josephs, L.
Judy, A. S.
Jauss, L. C.
Keene, W. P.
Krummes, H. P.
Linde, F. J.
Lorentz, Robert, Jr., U. S. N.
Lundegaard, E. M., U. S. N.
Langer, A. J.
Lieber, C.
Lyman, T.
Marsh, O. G.
McCarthy, F. J., U. S. N.

McDonald, T. C.
McNulty, A. H.
Muller, F. W.
Olds, W. H.
O'Neil, B. J.
Owen, J. A., Jr., U. S. N.
Price, M. J.
Pierce, S. W.
Pruett, J. F., U. S. N.
Ragel, H. G., U. S. N.
Reed, A. C.
Reuling, J. R.
Ruddock, J. C.
Ryan, R. C.
Ratchford, I. W.
Schaids, A. E.
Schwarts, J. L.
Searles, H. H.
Sooy, D. F., U. S. N.
Stadtherr, A. L.
Schutz, M. H.
Sweet, F. W.
Thomas, R. W.
Thompson, H. A.
Viscalli, Joseph
Winnard, W. F. R.

State Board of Health

Meeting of June 1.

The State Board of Health met in regular session in Sacramento on June 1st. The following members were present: Dr. George E. Ebright, President; Dr. F. F. Gundrum, Vice-President; Dr. Edward F. Glaser and Dr. Adelaide Brown.

Dr. Galvin J. Telfer was appointed State Health Officer for the Southern District beginning June 1st.

Upon the recommendation of the Director of the Bureau of Venereal Diseases the name of the Bureau was changed from "The Bureau of Venereal Diseases" to "The Bureau of Social Hygiene."

Upon the recommendation of the Director of the Bureau of Tuberculosis the subsidy was suspended for twenty-three beds in the women's ward of the Los Angeles County Hospital, for fifteen beds in Ward 8 of the San Francisco Hospital, and for the entire Tuberculosis Ward of the Sacramento County Hospital. These suspensions were made because the standards required by the State Board of Health were not being maintained.

Upon the recommendation of the Director of the Bureau of Tuberculosis, a dietitian will be employed temporarily to go into the tuberculosis hospitals for the purpose of arranging proper diets for the class of patients in these institutions. The Secretary pro tempore was instructed to notify all tuberculosis hospitals that separate ward provisions for children must be made.

The Board passed a resolution to the effect that a regular collegiate course in Mills College, leading to a degree and two additional years of training in the University of California Hospital or Lane Hospital be accepted as meeting in full the requirements of the Nurses' Registration Act for an accredited training school.

Certificates as registered nurses were granted to two nurses under the reciprocity provisions of the Nurses' Registration Act.

Upon the recommendation of the Director of the Bureau of Sanitary Engineers, under certain conditions a temporary permit was granted to the Sycamore Canyon Water Company near Glendale. A temporary permit was granted to A. V. Faight of Stockton to use a sewer well in Manteca for a period of six months.

The regular hearings of food and drug cases were then taken up by the Board.

F. F. GUNDRUM, M. D.,
Vice-President and Secretary pro tem.

Head Measurements of Soldiers and Identification

By ARTHUR MacDONALD,
Anthropologist, Washington, D. C.

I have submitted to the War Department for consideration some of the reasons why the measurements of the maximum lengths and maximum widths of the heads of soldiers should be taken. I suggest that this be done when the height of the soldier is measured in his regular examination for military service. These measurements with the collateral evidence, such as comparison of teeth with the dentist's record at home and with the evidence as to age, as indicated by ossification of the skeleton, will greatly increase the facility and probability of identification.

Collateral Evidence.

Teeth: Form, size, kind, regularity, position, and any peculiarity. Also nature of the fillings, whether crown or not, broken teeth, degree of decay and other details familiar to dentists.

Synostoses: The most frequent place is at a point on the sagittal suture at the union of its posterior fifth with its anterior three-fifths where the suture is clearly marked obelion. If the suture is entire, the individual is about thirty-five years of age or less. If the posterior sagittal point is commencing to close in, the subject is about forty years of age. The ossification of the coronal suture close to bregma indicates a subject fifty or more years of age. A closed temporal suture indicates an age of sixty-six years or more. In the white race ossification generally proceeds from behind forward; in the negro race it is the reverse.

Condition of Skeleton: Ossification of long bones: At sixteen, the calcaneum is ossified throughout; at seventeen the greater trochanter is united to the head of the femur; at eighteen the superior extremity of the femur is united in its entirety to the shaft; at nineteen the epiphyses of the metatarsal bones are united to the body; at twenty, the epiphyses of the metacarpal bones are united to the body; at forty-five, the xiphoid cartilage is anchylosed to the sternum; at fifty, the coccyx is anchylosed to the sacrum. These and other general statements based upon leading authorities would help much as collateral evidence towards identification when age is in question.

Comparison of Head Measurements of the Dead With Those of the Living.

In comparing the maximum length and maximum width of a skull where the soft parts are absent or decayed away with the measurements of the living subject 5.1 millimeters should be added to the maximum length and 6.9 millimeters to the maximum width of the skull. In addition to this, the cephalic index of the living subject can be compared with the cephalic index of the skull after death by adding two units to the cephalic index of the skull as done by Topinard and other authorities.

It might be added that the time required to make the measurements of the maximum length and maximum width of head is one minute. One person could measure from three to four hundred soldiers a day. The callipers to make the measurements would not cost more than $10 a pair, and probably much less. The Bertillion cephalometer, a French instrument, or the Collyer cephalometer, an American instrument, could be used. If not possible at first to make these measurements of all the soldiers, I would suggest a beginning be made as early as possible. As the French are very expert in such matters, it might be possible to have many of our men in Europe measured and the measurements sent back to this country. The men could be measured at any time here or in Europe convenient for them.

Physical Status of the American People.

The physical measurements of our young men

that are now being made for their entrance into the military service are the beginning on a large scale of establishing the physical status of the American people. These measurements of maximum width and maximum length of head which furnish the cephalic index are the two most important measurements of the body, and therefore increase greatly the scientific value of all the other measurements, whether physical or psychological. As most all important studies of peoples and races have the cephalic index, these two head measurements would make it possible to compare the American people with other peoples, races and nations. The American people are paying and sacrificing for the war; they are therefore entitled to such knowledge.

References.

Czekanowski (a Polish writer): Untersuchen über das Verhältniss der Kopfmasse zu den Schädel massen. Braunschweig, 1907, 4°, 48 pp.

Topinard, Anthropology, London, 1878, with introduction by Broca, 8°, 548 pp.

Deniker, Races et peuples de la terre, 16°, Paris, 1900.

Manouvrier, Apercu de céphalométrie anthropologique. Année Psychologique, 1898.

Paul-Boncour, Anthropoligie anatomique. Crane-Face-tête sur le vivant, Paris, 1912, 12°, 396 pp.

Schmidt, Anthropologische Methoden, Leipzig, 1888, 336 pp.

American Women's Hospitals

Dr. Louise Richter of the American Women's Hospitals spoke at the picnic of the Los Angeles Pioneers of California on May 25 in Sycamore Grove, as follows:

During the 1917 meeting of the American Medical Association, a number of representative women physicians of that organization, who are also members of the medical women's National Association, appointed a war service committee; and this committee inaugurated the American Women's Hospitals, with the approval of the Surgeon-General of the Army and the Director-General of the Department of Military Relief of the American Red Cross.

One object of this war committee was to determine the number of women physicians in the United States and the number willing for war service, but the main object in view was to establish a hospital, with a circle of outlying dispensaries in one of the devastated countries, when necessary.

This committee found that there were about 6000 women physicians in the United States, and more than 2000 have expressed a desire for war service, either at home or abroad.

The name American Women's Hospitals was chosen as a parallel and complimentary to the Scottish women's hospitals.

These professional women of America desire to follow in the footsteps of their British sisters and "do their bit" in this world's war for righteousness.

In the beginning of the war the British women physicians offered their services to their own country, but as you know at that time Great Britain was not favorable to women in the profession as well as in many other walks of life, so they were told that the British Red Cross and the War Office were fully supplied. However, undaunted, these patriotic women offered their services to the Allies and were accepted at once by the French, Belgian and Serbian Red Cross.

In December, 1914, the first complete hospital unit was sent out under the French Red Cross; their hospital of 400 beds was placed behind the firing line in sound of the guns.

In two years 2859 operations had been performed upon the wounded French, with 1.9 per cent. mortality.

The Scottish Women's Hospitals sent out their first unit to Serbia in January, 1915, just after the Austrian Army had been driven over the Serbian frontier, leaving thousands of their dead, sick and wounded behind. Every room and building available was filled with these miserable, shivering verminous men suffering with typhus of the most virulent type, septic wounds and bed sores.

They took charge of a 570-bed hospital when an urgent call came from 70,000 typhus cases entirely unattended and Dr. Alice Hutchinson was sent on with another unit, with fresh supplies from Scotland. On the way they halted at Malta to care for their own wounded countrymen from the Dardanelles.

They established four units in Serbia and cared for thousands and thousands of the sick and wounded, and the mortality was extremely high and their hospitals were hard hit, but they continued to work and work until they were gradually driven back by the Austro-German Army.

The Scottish Women's Hospitals did work of untold value in Salonica, Corsica, Russia and finally began work under the British War Office.

They now have eleven units in the devastated countries. The British Government have been fully convinced of the fitness of women physicians for medical war service. The Scottish Women's Hospitals have been placed in charge of a hospital of 600 beds in London for the British wounded.

The British Government is not only urging the women to study medicine but offering to pay for the medical education of women adapted for this work who are unable to meet their own expenses.

The work of the Scottish Women's Hospitals extends to the care of old people, babes and mothers, the wounded in the trenches, inspection of civic sanitary conditions, management of base hospitals, care of refugee children and the expectant mothers.

Women physicians placed in civilian relief work would leave the medical men free for military duty.

A number of the American women physicians offered their services when needed and now it is their duty to answer the urgent, insistent call for foreign war service and they have taken for their slogan "We are ready; put us across."

The patriotic men and women of the United States will undoubtedly support the American Women's Hospitals, just as the British men and women have supported the Scottish Women's Hospitals.

Besides efficiency in caring for the wounded soldiers, the women physicians can face cheerfully all hardships and bring a woman's atmosphere of comfort and a suggestion of home to our boys "over there."

Sixty-five American women physicians are already "across" and still insistent calls for more are coming from France, Serbia, Belgium and Italy.

Three women physicians from Los Angeles are now in foreign lands. Drs. Helen Woodroff and Margaret Farwell are doing civilian relief work in France.

A recent letter from Dr. Farwell expresses fully the need for medical women. She says: "The need for workers here is far greater than ever before and I only hope you will all work and work and then do it all over again and again. The woe and want is quite past belief. We think that the tenements at home are in poor condition and they are bad, but they cannot compare with what has happened to the children of France and the women of France, during these three years of perfect hell. Thank God it can never come to the United States."

One American woman physician is in a military hospital with General Pershing. One has charge of a maternity and children's hospital. Another is making a survey of the institutions for refugee children in France. Another has charge

of 500 refugee children. This woman took the place of a medical man who was rushed to the front in less than one hour after her arrival, and so on down the list, every one worthy of honorable mention.

There are many patriotic women entering war work, but they must first be trained; the woman physician is already trained, and ready for immediate service.

The American Women's Hospitals have been urged to establish hospitals in the war zone, similar to those established by the Scottish Women's Hospitals so this organization is making an effort to establish at once, a hospital in Serbia and one in France. The exact location must be left to the French Government and the American Red Cross in France.

Three hundred thousand dollars will fully equip one base hospital and after it is once established the French Government will gladly support it.

A recent drive in New York "went over the top."

We expect to put on a ten-day drive for $50,000, beginning June 22nd, and every man, woman and child will have the opportunity, not only to join the American Women's Hospital Auxiliary, but each one will have an opportunity to open his purse and raise his voice in our behalf.

"We are ready: Put us across."

New Members

Beck, Ida A., Gridley.
Burke, W. P., Redlands.
Zimmerman, I. M., San Diego.
Wylie, D. Baldwin, Salinas.
Moore, Wm. O., Soledad.
Taylor, Armstrong, San Francisco.
Butka, Leslie H., Sanitarium.
Herrick, F. Leslie, Oakland.
Siegmund, Fred W., Los Angeles.
Shickle, Chas., Los Angeles.
Mikels, Frank M., Los Angeles.
Foye, Frank A., Los Angeles.
Gardner, Vera Placida, Los Angeles.
Merrill, Harry P., Los Angeles.
Cleeves, Montague, Los Angeles.
Brimhall, S. J., Los Angeles.
Schenck, George F., Los Angeles.
Flint, J. L., Glendale.
Beatty, Hannah, Los Angeles.
Hunt, Helen A., Los Angeles.
Hollingsworth, L. D., Los Angeles.
Ruth, Ray Frederick, Los Angeles.
O'Brien, J. J., Los Angeles.

Resigned

Steinwand, Oscar W., Parlier.

Transferred

Benedict, Wm. L., Rochester, Minn.

Obituary

Birtch, Fayette W., San Francisco.
Muller, Carl L., Nevada City.
McMillan, Duglad, San Jose.
Ball, Seymour E., Eagle Rock, Cal.
Tisdale, T. P., Alameda.
Tredway, Edw. Everett, Pasadena.
Folsom, E. C., Santa Monica.
Flanagan, L. J., South San Francisco.
Choate, Jas. J., Los Angeles.

CAPTAIN WALTER S. JOHNSON
San Francisco

". . . when it should please my country to need my death."—Julius Caesar, Act 3, Scene 2.

He gave to the Medical Reserve Corps grace of manner, ever ready kindliness of heart, gentle sympathy, quick understanding of the soldier sick, young or old, with his many complicating emotions; and a selfless patriotism and a well tried professional ability. Unfortunately, his health was not equal to this "give all" nature.

The doubt of reaching ideals, so characteristic of well-informed, noble and striving men, added a mental strain to the heavy physical one of military responsibility.

When he was ordered to assume duty in the field, it being thought that out of doors would add to his strength, the entire staff of the Letterman General Hospital deplored his going. It would seem that his resistance was not fit for the task of military medicine, for he came back to us a sick man, and after a long struggle, died.

We think of him as one who died for his country. We give him the same adoration we give those serving in France, who meet death with honor, courage and faith in the right and might of our fight and flag.

J. WILSON SHIELS,
Major, M. R. C.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn.....Dr. W. H. Walker, Willows
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin.....Dr. W. F. Jones, San Rafael
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa.....Dr. Robt. Crees, Napa
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. P. H. Reilly, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI AUGUST, 1918 Number 8

NOTE.

All communications, applications and requests for information concerning the Volunteer Medical Service Corps should be made direct to Major J. M. Wheat, U. S. A., Santa Fe Building, San Francisco, Cal.

THE PASSING OF THE DINOSAURS.

Eons ago, in the youth of the world, when the first fossiliferous rocks were in the making, the trilobites were the apex of that pyramid of animal life which lived in the early Paleozoic seas. These ancient animals are described as being quick-witted, capable and agile, in short, as having promise of carrying that germ spark which should eventuate in vertebrate development and the full-flamed glory of man. With this great capability, however, and rich promise of development, the trilobites began to expend themselves in the production of "spines, excrescences and ornamental development of all sorts. Verily the trilobite wasted his substance in riotous living and from that moment his decline was rapid. Trilobites have absolutely vanished from the face of the earth."

In the line through which man developed, we find a certain constant, mysterious instinct which became finally articulate only in man himself. It is, in Stevenson's words, "the thought of duty, the thought of something owing to himself, to his neighbor, to his God; an ideal of decency, to which he would rise if possible; a limit of shame below which, if it be possible, he will not stoop." We see how those phyla which fell short of this idea, perished, or did not advance. We see that man's "ancestral lineage includes no creature which, when tried in the balance, was found wanting. In his germ-plasm there is no tainted heritage from nature's derelicts."

Turning several paleontological chapters ahead after the episode of the trilobites, we come to the mesozoic era of reptilian dominance, a "host of strange, cold-blooded, air-breathing vertebrates," whose huge bodies were wonderfully encased and protected with armor plate, scales and horns. They developed to the utmost the art of physical defense and offense. They multiplied in size and number, conquered and inhabited the earth, the sea and the air. Flying dragons, sea serpents and gigantic land tanks or dinosaurs, were creatures of fact. Not for nothing is it called the Age of Reptiles. Twenty-ton dinosaurs with twenty-ounce brains! And for a time they seemed the utmost achievement of nature. The art of war gone mad—the cold-blooded materialistic dominance of force—the master-race in bulk and ferocity—the sublimation of Power and Might unconquerable—the race of the militaristic dinosaurs.

And then, see the record of history. The path of human progress turned aside. An unwitting lesser scion of the reptilian family carried a mammalian strain to which man owes his origin. Note that it was not the militaristic dinosaur who pushed forward his race and survived. In spite of his physical prowess and wonderful defensive armors and splendidly developed weapons of claw and fang and horn, he had an undeveloped brain space which prevented his recognizing the underlying principle of organic progress, and he was cold-blooded and unmoved by all of what we might call humanistic antecedents which even at that dim day spelled racial life and psychic advance. And he perished and his place was taken by a warm-blooded, duty-recognizing race which led on to man.

For a most instructive and entertaining exposition of this paleontological parable, see Kirtley F.

Mather in the Atlantic Monthly for July. Read the story through, remembering that the progress of the race mirrors cosmic progress, and that the progress of a nation mirrors racial progress. Then apply the parable of the passing of the dinosaurs to strange, cold-blooded, air-breathing, vertebrate, militaristic Germany. As happened eons ago, so now will the ancient law operate, and the path of human progress will turn aside from him who denies "the thought of duty; the thought of something owing to himself, to his neighbor, to his God." Militarism cannot win the day because deep biological law will not permit it. The outcome by generations could not be in doubt even though Germany for a generation should rule the world. Yet Germany will never rule the world because she is opposing mankind, mankind's ideal and the great law of nature.

VENEREAL DISEASE.

It is important that the American non-medical public be shaken out of its false modesty regarding venereal disease. This object is being attained to a remarkable degree as a result of the Army and Navy policy combined with the work of the Commission on Training Camp Activities. We are being forced, as a nation, to take a sane and scientific attitude toward the subject. Syphilis and gonorrhea constitute one of our chief sanitary and public health problems. It is right that the facts of their prevalence, spread and danger should be known to every individual. Of all diseases only measles is more prevalent than gonorrhea. Syphilis is practically as common as tuberculosis in the average community. Even in the present war, the two together have often put more men out of active duty than the combined weapons and efforts of the enemy. Can any one, in the face of these facts, deny that one of the most important problems before the medical profession today is the control of venereal disease?

False modesty and lack of instruction and discussion are responsible for much of the present ill-favored situation. Ignorance of the problem of prostitution is another fault with serious consequences. Among the leaders in the new propaganda against venereal disease is the American Social Hygiene Society, with headquarters in New York, which issues a monthly Social Hygiene Bulletin. This Bulletin should be in the reception room of every physician.

It deserves reiteration that the control of venereal disease is among the leading emergencies in the United States at this time. It is of such importance in the first place because of military exigency, and, in the second place, because of its personal and public health importance to the American people. It is no longer scientific or progressive to say that this ancient pest and twin sister of booze cannot be exterminated. Even more certain than the eradication of alcohol as a beverage, may become the eradication of venereal disease, provided proper methods of campaign are adopted.

The Government has promulgated such methods of campaign and they are epitomized in the program of the Division of Social Hygiene of the War Department's Commission on Training Camp Activities. This program is based on educational propaganda on the one hand, and absolute increasing repression of prostitution on the other. It is associated with the abolition of alcohol as a drink in Army and Navy. Three sections of work have been outlined under the Division of Social Hygiene, and are being vigorously prosecuted. Of these the first is concerned directly with the Army and Navy. It is the object here to insure that no man shall contract venereal disease through ignorance. Education, safeguarding and cure are the watchwords. Selected lecturers present stereopticon lectures following a carefully prepared syllabus. These lectures describe the serious inroads of venereal disease on military efficiency, and the results to the victim and his family. The dangerous character of all prostitutes and loose women is emphasized, together with the healthiness of continence. The special temptations and physical hardships, particularly at the front, are discussed, and also common-sense ways of avoiding trouble and reducing temptation. Stress is laid on the positive motives for a clean life, such as decency, self-respect, efficiency and economy, reputation, respect for women, pride of family and race in the past and future, and, finally, patriotism.

The fact remains, however, that the sources of venereal infection are under civilian control and success of the Government program demands cooperation and sympathetic assistance from all patriotic men and women. The Division of Social Hygiene therefore devotes the second section of its activities to men's work. It is the endeavor to survey vice conditions in civil communities adjacent to camps and then to arouse the upright and patriotic men of these communities to improve these conditions and aggressively repress prostitution. They are shown that it is vital to the defense of the nation, as proved by war conditions, to combat prostitution and venereal disease, and that what is absolutely necessary for the defense of the nation is also necessary in defense of the home.

The third section of work deals with women's work. Among the numerous activities outlined under this heading, is a program of study for women's organizations and clubs. Among the topics suggested for frank and fearless discussion are: A, repression of prostitution with provision for feeble-minded prostitutes, medical treatment of the diseased, training and guidance of those who can be persuaded to earn an honest living; B, local legislation to enable health authorities to deal effectively with this hitherto neglected community health problem; C, emphasis on social standards, scientific basis for single standard of morality, and the many other economic questions involved; D, dissemination of the necessary facts about venereal diseases to demonstrate their seriousness and to dispel the enormous ignorance and indifference still existing about them. Such a program as this could be taken up with advantage by the women of every town in California, and physicians could well make it their patriotic duty to stimulate such studies.

In a recent address on this topic at the Harvard Medical School, Bishop Lawrence of Massachusetts said:

"The Government has acted to protect our soldiers and sailors. Why should not the same protection be given our munition workers, our ship-builders, and the whole people? . . . Of this I am clear, that during the war the same protection should be given all the people as is given our soldiers and sailors."

This is a pertinent query and applies as directly to alcohol as it does to venereal disease. Whatever our individual personal opinion as to methods of controlling prostitution and venereal disease, here is a program, based on enormous experience and expert study, adopted by the Government, and we are asked to support it. Such a request should be received by the medical profession with the force of military orders. Patriotism and public health demand the control of venereal diseases. Physicians must continue to lead the attack. Every individual physician has a part to play in this program. Let him find it quickly and waste no time in getting to work.

NEW REGULATION FOR VENEREAL DISEASE REPORTS.

A patriotic appeal is being made by the Bureau of Social Hygiene of the State Board of Health to every California physician. More physicians must become interested in reporting syphilis and gonorrhea. In order to accomplish this and in order to aid the physicians to control infectious cases the State Board of Health has adopted the West Australian method of reporting these diseases.

An explanatory letter is being sent to each physician and notification cards are in the hands of Health Officers for distribution. Card A bears a serial number which the physician is requested to incorporate in his case history. It is sent to the State Board of Health, bearing only the number and some facts concerning the case. The card is perforated and half of it is given to the patient so that he may understand the physician's legal responsibility. If the patient does not return for treatment and if the physician has not been informed by another physician that the patient is reporting to him, then the first physician reports by means of card C to the State Board of Health, the name and address of the patient, who is then liable to quarantine.

Pamphlets instructing the patient concerning the nature of the infections have been prepared. Physicians are requested to give to each patient one of these at the time of the first visit. The pamphlets may be obtained in any number from the Health Officers, the State Board of Health or the Bureau of Social Hygiene.

No.....(For the Patient)

REMEMBER THIS NUMBER AND FOLLOW INSTRUCTIONS.

You are given this pamphlet of instructions with this serial number by your doctor because the law required him to do so and to report your case to the Health Officer by this number WITHOUT REVEALING YOUR NAME.

If you change doctors for any reason and wish to keep your name concealed you must see to it that the doctor you last consult notifies the doctor previously having charge of your case within TEN DAYS (10 days).

If you fail to come for treatment at the time ordered by your doctor within the period in which your disease is infective and he does not receive notice within TEN DAYS from another doctor, stating that you have placed yourself under his professional care, the doctor giving you this pamphlet is obliged by law to report your NAME AND ADDRESS to the health authorities as a person suffering from a disease dangerous to the public health and presumably not under proper medical advice and care sufficient to protect others from infection. You will then be liable to quarantine or such other procedure as the Board of Health may determine. If you want your name kept secret, follow these instructions carefully. Your doctor will tell you when your case is no longer infectious.

No..... Card A.

PHYSICIAN'S REPORT OF CASE OF GONORRHEA OR SYPHILIS.

Strike out gonorrhea or syphilis as case may be

Make the Serial Number a Part of Your Case Record

Date.....19..... .....Cal.
City or town

Age..... Sex..... Color..... Marital relation.....
Single, married, widowed, divorced

Occupation..... Date of infection.....

Source of infection.....
Commercial or clandestine prostitute—Address if investigation is indicated

Was patient intoxicated at time of exposure?.....

Unemployed.....

Is patient in infectious state of disease?.....

If so, is patient likely to infect others?.....

Has this case been previously reported?.....

Under what number?.....

Has diagnosis been confirmed by laboratory test?

.....

Wassermann, smear for gonococci or spirochete

.....M. D.

.....
Address

Mail this card immediately to the State Board of Health, Sacramento, and in addition report the case by number to your local Health Officer.

COLOR BLINDNESS AMONG SEAMEN.

The importance of differentiating between those who are dangerously color blind—that is, unable at all times to distinguish between red and green—and those who are only slightly color-blind, is brought out in a recent study conducted by the U. S. Public Health Service and reported in Public Health Bulletin No. 92.

The following classes are regarded as dangerously color-blind and therefore to be excluded from positions in which they would be required to read colored signal lights: (1) Those who are able to see but three or less colors in the spectrum (the normal person sees six or seven); (2) Those who see more than three colors in the spectrum, but who have the red end so shortened as to prevent the recognition of a red light at a distance of two miles; and (3) those with a central scotoma (that is, a blind or partially blind area in the field of vision) for red and green.

It was concluded that this class of persons could be distinguished from those harmlessly color blind by the use of the Edridge-Green color lantern, which was found preferable to colored yarns. The theories on which the color lantern is based are given in detail in the publication.

Another feature of the investigation was the study of the prevalence of color blindness. Excluding those able to distinguish five colors in the spectrum, it was found that color blindness occurs in about 8.6 per cent. of men and 2.2 per cent. of women. Color blindness of a degree dangerous

in occupations requiring the recognition of colored signal lights was found to occur in about 3.1 of men and 0.7 per cent. of women. Among refractive conditions of the eye, color blindness occurs least frequently in eyes apparently without demonstrable refractive error; it occurs most frequently in eyes showing mixed astigmatism.

The examinations were made as a part of other studies of the effect of illumination on vision conducted as a part of an illumination survey of the Federal department buildings in Washington, D. C. One thousand persons were tested with the Edridge-Green lantern to determine both the value of the lantern and the effect, if any, of refractive conditions, lesions, and anomalies of the eye, and also of sex, upon different degrees of color perception.

A special study of the Jennings self-recording worsted test was also made, fifty persons being tested with this and other tests. The results with the Jennings test were found to be too inaccurate for most work, although it was found to be superior to other tests in certain lines of work where great accuracy and the classification of color defects were not essential.

UNIVERSAL SERVICE.

Every patriotic American believes today in universal service as a war measure. This, in the broad sense, simply means complete and efficient organization and mobilization for war of all the resources of the country, both human and material. It means "work or fight" for men in draft age. It means suppression of non-essential activities of all sorts. It means for each man and woman to get the maximum physical efficiency personally. It means a conscious development of individual patriotism. It means intelligent and constructive study of our personal and national ideals. It means scrutiny of national problems and policies. It means informed interest in politics, in social activities of relief and charity, in local and general social problems of civics, morals, religion and health. It means, in short, a literal reading of the words, *universal* service, making every person contribute his utmost to himself and his fellows, in the way of physical, intellectual and moral improvement. *That* is universal service.

We all admit the excellence of this ideal of universal service in time of war. We see the necessity of it for the nation, if we are to win the war. And we see the incalculable benefit of it to the individual, if he is not to slip back into the slough of indifference, self-complacency and selfishness. Would it not be worth while to conserve these good things and have them available *after* the war as a mark of a great lesson the war has taught us. It is trite to point to the dangers to our body politic and to the average individual American, from the prosperity, easy living and self-centered round of peace times. Why not carry out of the war the great purpose and ideal of universal service, and just as it is the means whereby we shall win the war, so shall it be the means whereby more insidious and attractive perils of peace may be averted.

As a permanent feature of American life, universal service could with advantage be made obligatory on both young men and women. The elements of discipline, obedience, study and physical development should be emphasized for both. There might well be for young women a choice of several lines embracing social work, farming, domestic science, business and other technical fields. For men, likewise, there could be a variety of subjects provided. For all, regular physical development should be required and for the men this should include intensive military training. All should be carefully instructed in their civic duties and obligations, in the history of the United States and the principles on which our government rests.

The advantages of universal service on such a broad hasis as outlined, are very weighty and vastly overbalance the one ohjection raised, namely, that universal service would foster militarism. It has not done so in Switzerland and there is no valid reason for thinking it would do so here. It would provide a sure and wonderfully efficient means of Americanizing our foreign elements. It would disintegrate class prejudice. It would inculcate true democracy and an intelligent and stalwart patriotism. It would develop a citizenry anxious and competent to exercise the duties of citizenship. Withal it would prove a tremendous unifying, energizing force in national life. It would also be of the utmost value from the health standpoint, both personal and public, permitting early discovery and treatment of disease, and affording an exceptional opportunity for instruction in hygiene and disease prevention. By all means let us have universal service and let us make it of the fullest service in building up the highest type of American manhood and womanhood.

TUBERCULOSIS SITUATION.

Mrs. E. L. M. Tate Thompson, Director of the Bureau of Tuberculosis, State Board of Health, calls attention to the urgent need for more hospital beds in tuberculosis sanitaria. The Bureau of Tuberculosis was notified recently that 145 men were about to be discharged from Camp Kearny with pulmonary tuberculosis. San Francisco had eighteen and Los Angeles twenty-seven. This added number, coupled with the fact that many of the men now in France have members of their families that must he cared for, makes an adequate number of beds an absolute necessity. There were 1,314 men rejected in the first draft and 449 in the second. A large percentage of these men are under supervision. To date over 1,500 California men have been discharged on account of tuberculosis. This, coupled with the thousand non-resident tuberculous soldiers, makes it necessary to double our efforts. The men wish care as rapidly as they can be placed out over the State.

With our present plan, California soldiers who were discharged, will be back on the job before other States even know where their men are.

California is the only State in the Union that has a complete registration of its rejected and discharged tuberculous soldiers. No small amount of this success is due to the supervisors in nearly all of the counties in the State, and to the excellent initiative and organizing ability of the Bureau of Tuberculosis of the State Board of Health.

EDITORIAL COMMENT.

Members of the Medical Society of the State of California who have received literature from the Red Chevron Organization, requesting them to donate their services to the cause, are hereby warned that the Red Chevron was investigated at the last meeting of the Council, and the Council does not give its approval to this organization. A full discussion of the matter will occur in our next issue.

It is worth remembering that every punctured wound of the foot, especially that most frequent variety due to stepping on rusty nails, is a potential cause of tetanus. Every such wound should be treated by immediate free incision, permitting hemorrhage, then swabbed with phenol, followed by alcohol. A compress dressing should be applied which will allow access of oxygen, keep the wound open for a time and protect against further contamination. The adjacent skin should be iodined. 1500 units of tetanus antitoxin should be administered hypodermically at once. Remember that tetanus bacilli are anaerobic, spore-bearing, and most apt to occur in material contaminated with horse manure, hence especially in street dust, and that the toxin travels along the peri-neural lymph channels from wound to central nervous system.

COMFORT STATIONS.

Public accommodation is being met by some large cities in different ways. In the East, a number of the cities have constructed stations at expenditures varying from $6,000 to $18,000. The more expensive stations include news and bootblack stands, with a view of making them self-supporting. Other cities have used an idea suggested by the International Public Comfort Station Association: That of various merchants in the city displaying a neat little sign, designated by the city, which shows or indicates that within there is a comfort station for the accommodation of either men or women, or both. This system, so far, seems to have met with success. It saves the city a heavy expenditure for new buildings, and also benefits the merchant by material increase in business. It has been suggested that stations be located at the junction points of some of our automobile roads where traffic is very heavy, and that a sufficient amount of ground be reserved for future growth.—Bulletin, Los Angeles Health Department.

Original Articles

THE PREVENTION OF BLINDNESS WORK OF THE STATE INDUSTRIAL ACCIDENT COMMISSION.*

By WILL J. FRENCH,
Member California Industrial Accident Commission, San Francisco.

The earliest reference to "Safety First" I have been able to find is in Chapter 22, verse 8, of Deuteronomy, the fifth book of Moses, where these words appear: "When thou buildest a new house, then thou shalt make a battlement for thy roof, that thou bring not blood upon thine house, if any man fall from thence."

The foundation of English common law is taken from the five books of Moses, from Genesis to Deuteronomy, and we can there read much that represents the highest ideals of present-day civilization. If they had used emery-wheels in those days, I think we would be able to read a verse following the one quoted about like this: "When thou grindest tools on the emery-wheel; then thou shalt use a hood over the wheel and goggles over thine eyes, that thou bring not blindness upon thine house because of dust entering the windows of thy soul."

The National Safety Council estimates there is one worker killed every fifteen minutes, day and night, in the United States, and one injured every sixteen seconds, day and night. This gives us more than 30,000 killed and about 2,000,000 injured. It is estimated that out of this number there are 200,000 eye injuries. The National Committee for the Prevention of Blindness states there are 100,000 blind persons in the United States and that more than 50 per cent. are needlessly blind.

There are, in round figures, 1,000,000 employees in the State of California. There are 300 industrial injuries each working day, excluding Sundays, in the State. We thus have approximately 100,000 industrial injuries each year in California. In 1914, 1915 and 1916 there were 23,451 eye injuries. Of this number 549 were permanent injuries and 22,902 temporary injuries. There were 11 cases of total blindness. The medical and compensation costs for these eye injuries will be about $788,000. It is impossible to give a definite amount at this time, because the 11 cases of total blindness call for life pensions, and we have simply computed the amounts that would be paid the injured men, based on the mortality tables used by the insurance companies. The time lost by the 22,902 temporary injuries was 234.3 years. This means that we found just what each man lost; one man might lose a day from work, another man a week, and another man six months, and so on. We added the total together and got the 234.3 years. We have in California 26 eye injuries each working day and the number will grow larger as there is an increase in the total of employees, especially when we consider the large groups of men that are employed in the shipbuilding plants who are more

* Synopsis of address delivered on May 28, 1918, before the Section on Eye, Ear, Nose and Throat of the San Francisco County Medical Society.

likely to sustain eye injuries because of the continual chipping of steel and use of emery-wheels and machinery used in the construction of ships.

The Industrial Accident Commission advocates the wearing of goggles whenever workmen are liable to have their eyes injured. An individual pair of goggles for each man is advised because of the advantage of interesting him in what is practically his property and for the further good reason that men naturally object to wearing goggles that have been promiscuously used. The use of masks is urged for welders and babbitters. These goggles and masks are so strongly constructed that they not only fit the eyes but have shields at the side of each lens to prevent flying chips from entering the eyes from the sides.

Printed matter is used to advantage in emphasizing preventive methods. The National Safety Council issues posters drawing attention to the value of wearing goggles and masks. Sometimes these notices are printed in foreign languages. Special phrases are apt to attract the attention of workmen. For instance, one phrase that rivets the attention is: "You can see through glass goggles, but you can't see through glass eyes."

In all accident-prevention work the shop or factory safety committees are able to do much to reduce the death and injury tolls. Members of such committees will prevent a worker using his finger or his handkerchief, or a toothpick, in removing foreign bodies from the eye. This alleged "shop doctor" can do more mischief than an oculist can undo. Immediate and competent medical care may not only save the sight of an eye but save the employer or insurance company a considerable sum of money.

One serious objection to the use of goggles or masks in hot places is that the glass becomes clouded. There are available different kinds of "Anti-Sweat Pencils" that brighten the glass and prevent the clouded effect for several hours after each application.

The International Association for Labor Legislation has issued a list of 56 industrial poisons, of which number 36 affect the eyes. There is a continual effort to counteract the effect of these poisons and new inventions or methods are utilized as soon as they become known. The Commission recognizes the deleterious effects of wood alcohol and urges the use of denatured alcohol. The latter is just as good as wood alcohol and is safe and its use will save the sight of many an eye.

Properly ventilated and lighted workrooms have an important place in saving eyesight. Unshaded or flickering light should be avoided. Each shop or factory that has a saw-tooth roof with the upright portion filled with glass not only supplies the light for workmen so much to be desired, but enables them to escape that eye-strain that later on will lead to trouble. Dangerous fumes, vapors and gases can be removed by hoods and exhausts. The missed hole in blasting is a contributing factor to injured eyesight, and occasionally causes total blindness. The Commission's Mine Safety Rules require extraordinary care to see that all the shots have been fired. "Mushroomed" tools should be replaced by good tools so that the chances of flying steel and iron are minimized. Precautions can easily be taken by means of special eye coverings to protect the eyes of men working among acids or engaged in sand blasting.

The Commission maintains a Safety Museum at 529 Market Street, San Francisco, and visitors are cordially invited. Among the more than 250 exhibits are eye protective devices, goggles and masks, as well as signs and posters, all aimed to throw every safeguard around the eyes of men and women that work in factory, shop or office. There will also be found a number of goggles broken by chips of flying steel or other material. The lenses are so strongly constructed that it is almost impossible to break them from the outside, though it is comparatively easy to break the glass by using pressure from the inside. As flying chips always strike the outside, this special construction gives the necessary protection to the eye.

A PLEA FOR A COMPLETE UROLOGICAL DIAGNOSIS AT ONE SITTING.

(Preliminary Communication.)

By MARTIN KROTOSZYNER, M. D. and GEO. W. HARTMAN, M. D., San Francisco.

In a recent comprehensive treatise, dealing with the "comparative result of various functional kidney tests" [1], a table is presented containing, in historical sequence, a fairly complete list of the many tests that have been devised for determination of renal function, the majority of which were introduced during the last fifteen or twenty years, or since the dawn of the era of scientific urology. As a result of this overproduction of renal tests, which were thrust upon the profession so frequently and at such short intervals as to prevent the average clinician familiarizing himself with their meritorious or objectionable features, a deplorable lack of uniformity has developed among urologists in various parts of the world as regards the estimation of the clinical value and preferential application of these tests. In diagnostically difficult cases, therefore, and especially in the relatively large numbers of renal lesions, where the indication for a radical operative procedure (nephrectomy), not rarely depends upon comparatively small differences in functional values, it has become customary at many clinics to perform several tests repeatedly at different cystoscopic sittings, in the hope of clinching, in this way, the preoperative diagnosis in a more exact manner.

It goes without saying, that some urological problems, even in most experienced and skilful hands, can only be solved on the basis of painstaking investigation, entailing more than one, and sometimes many prolonged cystoscopic sittings. In these comparatively rare cases, of course, the pain and discomfort to the patient, and the loss of time to the physician, incidental to repeated instrumentation, must be considered insignificant drawbacks as compared with the advantage of establishing by these means the otherwise unattainable diagnosis. This, though, is not true of the great majority of alleged or real lesions of the upper urinary tract, where at present the various

urological diagnostic methods, including pyelography, in many quarters are spread over several sittings, often separated by long intervals. It appeared, therefore, desirable that for these conditions, which constitute the daily routine work of the busy urologist, a definite diagnosis should be obtained in a single and comparatively brief cystoscopic sitting, covered by the application of a method of examination that is apt to combine reliable diagnostic results with least discomfort to the patient.

The most important object of urological investigation of a given case, especially from the standpoint of prognosis and treatment, consists in determining the degree of anatomical and functional impairment of the kidneys and, in the presence of unilateral involvement, in ascertaining the functional integrity of the presumably healthy organ. In ureteral catherization we possess an exact method of obtaining total renal secretion in a separate form, and thus could easily arrive at satisfactory conclusions upon the actual amount of function performed by either organ, if we were able to collect the total quantity of catheterized renal urines during a certain time-period and thus formulate therapeutic indications on the basis of clean-cut arithmetic. Of the various reasons, why the solution of this problem is still wanting, it may suffice to mention the often occurring alteration of individual renal activity by reflex polyuria or oliguria, due to the introduction of the ureteral catheter.

Observation, therefore, of undisturbed renal activity by simple cystoscopy, as feasible by application of the indigocarmin test, recommends itself as a safe and simple method, which, according to an authoritative statement in the contemporaneous American literature [2] is "the most practical, useful and best test for the estimation of kidney sufficiency or insufficiency at the command of the surgeon today." The main advantage of the test, to our minds, is that, while it obviously does not permit us to ascertain with mathematical exactness the quantity of the functionating parenchyma of a kidney, its application, nevertheless, enables us to determine the difference in the activity of either organ and to recognize with accuracy, on which side the main part of renal work is performed, accomplishments which in the great majority of instances suffice for practical diagnostic purposes.

The disadvantages of intramuscular administration of indigocarmin (pain, loss of time in determining its appearance, etc.), are overcome by intravenous injection of the dye. In the beginning of our work we followed for intravenous indigocarmin administration the technic of Peterson [3] who injects 4 cc of the solution containing one grain of the dye, but soon found that three-fourths of a grain, or 0.05 of the powdered dye, dissolved in 3 cc of hot water yielded equally as satisfactory results as regards onset and intensity of dye-secretion. For observation of undisturbed kidney activity we would also suggest to arrange the cystoscopic sitting, according to Voelcker's [4] advice, for the morning hours and, after a rather dry breakfast, not including coffee. In artificial polyuria the dye is excreted in a comparatively weak concentration, while the spurt occurs at an almost uninterrupted sequence and with such tonic intensity, as to cause its almost immediate mixture with the bladder fluid, which thus quickly assumes a blue color equal to that of the spurt and obviating by these means color-contrast observation. By carrying out the examination without artificial polyuria, on the other hand, a deeply colored spurt is obtained, which, owing to its higher specific gravity, sinks to the deepest part of the bladder, where it does not interfere with chromocystoscopy.

By applying the test to a large number of normal and to all available pathological cases during the last year, we were able to convince ourselves to our satisfaction, that the intravenous indigocarmin test, if carried out lege artis by an experienced observer, permits of trustworthy deductions as regards kidney sufficiency and insufficiency. For purposes of group comparison we decided, as in previous work of similar scope [5], to utilize case groups of equal numbers for tabulation.

Tables 1 and 2 were prepared with the view of ascertaining the difference of parallelism of color-appearance and character of spurt in normal and pathological cases.

Table 1 demonstrates for normal cases average coincident appearance of indigocarmin on both sides in about 5 minutes, showing also good contraction of the meatus and a lively and deeply blue colored spurt.

Table 2 shows in about 90% of pathological cases, on the diseased side, delayed average appearance of indigocarmin, reduced intensity or absence of color-elimination, and a sluggish spurt emitted from a poorly contracted or gaping meatus.

The intravenous indigocarmin test, is also in pathological cases as simple as it is expeditious. For in the great majority of this class of cases indigocarmin appearance, as evidenced by the average of less than 12 minutes obtained in our work, may be expected in a reasonably short time.

For quantitative determination of comparative renal function we decided to employ one test of retention and one of elimination. Of the former tests the comparative urea test commends itself on account of its simplicity and its accurate results. The same is true of the intravenous phloridzin test which, according to a previous statement[6], gives more accurate, and thus more reliable results, while its technic is as simple and less time consuming than that of the phenolsulphonephthalein test.

As ascertained by comprehensive experimental work, the ratio for comparative values of urea, phloridzin and phenolsulphonephthalein in normal cases was 104:107:187, showing a marked discrepancy of parallelism for phthalein as against almost equal values for phloridzin and urea. To the factors mentioned, in that connection, as the underlying reasons for this phenomenon (excretion of unequal amounts of urine by the kidneys, leaking of urine alongside the ureter catheter, reflex unilateral polyuria or anuria, etc.), must be added the uncertainty of quantitative colorimetric deter-

Table I

Indigocarmine — Normal Cases.

No.	Sex	Age	Diagnosis	Meatoscopy: Appearance R.	Appearance L.	Spurt R.	Spurt L.	Color R.	Color L.	Remarks
1.	male	59	prostatic hypertrophy	6	6	normal	normal	deep blue	deep blue	0.05 of the powdered dye dissolved in
2.	male	45	sexual neurasthenia	3	4	normal	normal	deep blue	deep blue	3 c.c. of hot water injected intraven-
3.	male	23	gonorrheal polyarthritis	4	4	normal	normal	deep blue	deep blue	ously.
4.	female	40	urethral caruncle	5	5	fairly good contraction	normal	blue	deep blue	
5.	male	40	chronic prostatitis	5	5	normal	normal	deep blue	deep blue	
6.	male	38	sexual neurasthenia	5	5	normal	normal	deep blue	deep blue	
7.	female	29	endometritis irritable bladder	5	6	normal	normal	deep blue	deep blue	normal spurt = good contraction of meatus
8.	male	42	prostatic abscess	6	5	fairly good contraction	fairly good contraction	blue	blue	and active jet of urine.
9.	male	33	sexual neurasthenia	5	5	normal	normal	deep blue	deep blue	
10.	male	27	chronic gonorrheal prostatitis	5.5	4.5	normal	normal	deep blue	deep blue	
			Average	4.95	4.95	normal	normal	deep blue in 90%.	deep blue in 90%.	

Table II

Indigocarmine — Pathological Cases.

No.	Sex	Age	Diagnosis	Meatoscopy: Appearance R.	Appearance L.	Spurt R.	Spurt L.	Color R.	Color L.	Remarks
1.	female	46	rightsided pyonephrosis	31	6	Sluggish and scant	lively abundant	faintly blue	deep blue	0.05 of indigocarmine dissolved in 3 c.c. of
2.	male	19	leftsided pelvinephritis	4	6	full and abundant	Sluggish and scant	deep blue	light blue	hot water injected intravenously.
3.	male	36	leftsided stone pyonephrosis	4	10	full and abundant	Sluggish and scant	deep blue	faintly blue	normal spurt = good contraction of meatus
4.	male	41	rightsided coli-pyelonephritis	5	3	full and abundant	Sluggish	deep blue	light blue	and active jet of urine
5.	male	32	rightsided ureteral calculus.	15	3	very Sluggish	lively abundant	faintly blue	deep blue	Sluggish spurt = oozing of urine from poorly
6.	female	21	rightsided coli-pyelitis	8	5	somewhat Sluggish	full and abundant	light blue	deep blue	contracted or gaping meatus.
7.	male	34	rightsided nephrolithiasis	7	5.5	Sluggish and scant	lively abundant	light blue	deep blue	In 80 to 90% of cases blue color
8.	male	42	rightsided coli-pyelitis.	5.5	0.0 in 90 minutes	normal	no meatus visible	deep blue	no spurt visible	gradually increased in intensity on
9.	male	23	leftsided pyelonephritis.	4.5	14	normal	Sluggish and scant	deep blue	faintly blue	diseased side.
10.	female	40	bilateral pyelonephritis.	4.5	10	normal	Sluggish	deep blue	light blue	
			Average	8.85	6.25	normal in 60%.	normal in 40%.	deep blue in 60%.	color less intense or absent in 40%	

Comparative Indigocarmine, Phloridzin. Table III. Normal Cases.

No.	Sex	Age	Diagnosis	Appearance: Indigocarmine R.	Indigocarmine L.	Phloridzin R.	Phloridzin L.	Comparison R.	Comparison L.	Remarks.
1.	male	44	chronic prostatitis.	3	4	5	5	1.3	1.0	0.05 of powdered indigocarmine
2.	male	40	chronic prostatitis.	5	5	5	5	1.0	1.0	in 3 cc of hot water injected
3.	male	30	sexual neurasthenia.	5	5	4	5	1.0	1.25	intravenously
4.	female	29	endometritis irritable bladder.	5	6	4	4	1.2	1.0	
5.	female	38	urethral caruncle.	5	4	4	4	1.25	1.0	
6.	male	45	chronic prostatitis	5	5	5	5	1.0	1.0	2 cc of ½% phloridzin solution
7.	female	32	irritable bladder.	4.5	5	5.5	5	1.1	1.1	injected intravenously.
8.	female	36	nephroptosis.	5	5	4.5	5	1.0	1.1	
9.	male	39	sexual neurasthenia.	5	5	5	4	1.0	1.25	
10.	female	24	gonorrheal urethro-trigonitis.	5	5	5	5	1.0	1.0	
			Average	4.75	4.9	4.7	4.7	10.85	10.70	

Comparative Indigocarmine, Phloridzin. Table IV. Pathological Cases.

No.	Sex	Age	Diagnosis	Appearance Indigocarmine R	Indigocarmine L.	Phloridzin R.	Phloridzin L.	Comparison R.	Comparison L.	Remarks.
1.	female	46	rightsided pyonephrosis.	31	6	15	5	0.5	0.8	
2.	male	19	leftsided pyonephritis.	4	6	7	8	0.6	0.75	Technique of indigocarmine
3.	male	36	leftsided stone-pyonephrosis.	4	10	6	22	0.6	0.45	and phloridzin injection the
4.	male	41	rightsided colipyelonephritis.	5	3	12	8	0.4	0.375	same as employed in
5.	male	32	rightsided ureteral calculus.	15	3	18	6	0.8	0.5	previous tables.
6.	female	21	rightsided colipyelitis.	8	5	8	5	1.0	1.0	
7.	male	34	rightsided nephrolithiasis	7	5.5	7	5	1.0	1.0	
8.	male	23	leftsided pyelonephritis.	4.5	14	9	17	0.5	0.8	
9.	female	40	leftsided pyelonephritis.	7	10	9	10	0.8	1.0	
10.	female	46	rightsided colipyelonephritis.	6	4	5	4	0.83	1.0	
			Average	pathological 10.9	normal 4.9	pathological 12.2	normal 6.4	7.03	7.675	

Comparative Indigocarmine Phloridzin and Urea. Table V Normal Cases.

No.	Sex	Age	Diagnosis	Indigocarmine R.	Indigocarmine L.	Phloridzin R.	Phloridzin L.	Urea R.	Urea L.	Comparison	Comparative percentage	Remarks.
1.	male	48	chronic prostatitis.	5	5	2.0	2.0	0.005	0.006	1.0 : 1.0 : 0.83	94%	0.05 of indigocarmine dissolved in 3cc
2.	female	42	ureteral caruncle.	4	5	1.2	1.3	0.01	0.01	0.8 : 0.92 : 1.0	91%	of hot water and 2cc of ½%
3.	male	38	chronic prostatitis.	4.5	5	1.35	1.5	0.024	0.023	0.9 : 0.9 : 0.95	92%	phloridzin solution injected intra-
4.	male	28	sexual neurasthenia.	5	6	1.0	0.9	0.014	0.015	0.83 : 0.9 : 0.95	89%	venously.
5.	female	46	nephroptosis.	4	4.5	2.0	2.0	0.02	0.02	0.9 : 1.0 : 1.0	97%	Quantitative sugar determination made
6.	female	29	endometritis urethritis and trigonitis.	5	5	1.5	1.3	0.01	0.01	1.0 : 0.9 : 1.0	97%	by means of Lohnstein pre-
7.	male	55	incipient prostatic hypertrophy.	6	5	0.66	0.7	0.08	0.085	0.83 : 0.95 : 0.9	89%	cision sacharometers.
8.	female	24	gonorrheal urethritis and trigonitis.	5	5	1.3	1.3	0.04	0.03	1.0 : 1.0 : 0.8	93%	Comparative urea determination.
9.	male	38	chronic prostatitis.	5.5	5	1.6	1.8	0.014	0.012	0.95 : 0.9 : 0.87	91%	made by means of
10.	male	33	rightsided hydrocele.	4.5	4.5	1.1	1.2	0.011	0.011	1.0 : 0.95 : 1.0	97%	Doremus ureometers.
			Average	4.85	5.0	1.371	1.4	0.0228	0.0222	Average percentage =	93%	

Comparative Indigocarmine, Phloridzin, and Urea. Table VI Pathological Cases.

No.	Sex.	Age	Diagnosis	Indigocarmine R.	Indigocarmine L.	Phloridzin R.	Phloridzin L.	Urea R.	Urea L.	Comparison	Comparative percentage	Remarks.
1.	male	41	rightsided colipyelonephritis	5	3	0.5	1.0	0.004	0.02	0.6 : 0.5 : 0.5	53%	
2.	male	48	rightsided pyelonephritis	6	4	0.9	2.5	0.005	0.012	0.66 : 0.36 : 0.42	48%	Trace of phloridzin
3.	female	21	rightsided colipyelonephritis	8	5	0.56	0.26	0.005	0.01	0.625 : 0.46 . 0.5	53%	sugar figured as 0.01
4.	female	42	rightsided pyonephrosis	31	6	trace	0.5	0.001	0.02	0.2 : 0.02 : 0.05	90%	
5.	male	19	leftsided pyonephritis	4	6	0.6	0.5	0.013	0.011	0.66 : 0.83 : 0.84	78%	Quantitative Sugar and
6.	male	38	rightsided ureteral calculus.	15	3	0.4	2.0	0.005	0.01	0.2 : 0.2 : 0.5	30%	urea determinations
7.	male	23	leftsided pyelonephritis	4	6	0.3	0.1	0.007	0.005	0.66 : 0.33 : 0.7	56%	made in the same
8.	female	42	rightsided pyonephrosis	29	6	0.1	0.9	0.003	0.016	0.2 : 0.11 : 0.2	27%	manner as in
9.	female	46	rightsided colipyelonephritis	6	4	0.16	0.28	0.005	0.008	0.66 : 0.6 : 0.625	62%	table V
10.	female	30	rightsided hydronephrosis and nephroptosis	4	3	0.3	0.5	0.002	0.005	0.75 : 0.6 : 0.4	55%	
				patho. 11.6	normal 4.2	patho. 0.323	normal 0.914	patho. 0.0036	normal 0.0121	Average percentage =	60.2%	

mination. For this reason alone we considered it best to reject a priori quantitative indigocarmin determination, as the ratio of error in colorimetric estimation appears to be even greater for this dye than for phthalein.

With the end in view of utilizing for our work the phloridzin in combination with the indigocarmin test, tables 3 and 4 were prepared, in order to ascertain the ratio of coincidence and discrepancy of appearance for both substances in normal and pathological cases.

Table 3 shows practically complete coincidence of indigocarmin and phloridzin-appearance for normal cases.

Table 4 shows in pathological cases for indigocarmin and phloridzin-sugar an equal discrepancy of about 50% between the healthy and diseased sides, and a parallelism of over 90% for bilateral appearance of both substances.

Finally, tables 5 and 6 were prepared with the view of ascertaining the ratio of parallelism between the qualitative indigocarmin and the quantitative urea and phloridzin tests.

Table 5 shows a bilateral parallelism of indigocarmin appearance, phloridzin-sugar quantity and urea quantity in 93% of normal cases.

Quantitative phloridzin and urea values showed for this class of cases the same bilateral parallelism of practically 100% as ascertained in previous experimental work[7].

Table 6 shows for pathological cases an average coincidence of over 90% for indigocarmin appearance, phloridzin quantity, and urea quantity between the diseased and healthy sides.

Bilateral indigocarmin appearance and amounts for phloridzin and urea quantity show a parallelism of about 60%.

Bilateral values for phloridzin and urea quantity show also for this class of cases a parallelism of practically 100%.

Our work of testing comparative renal function in normal and pathological cases with the combination of the qualitative indigocarmin and the quantitative phloridzin and urea tests has proved to our satisfaction that the diagnostic evidence based upon parallelism in values obtained with these tests is, in the great majority of instances, sufficiently conclusive as to obviate the necessity of repeated investigation.

At present we carry out the complete urological examination at one sitting according to the following technic:

On the day preceding the examination the patient is prepared for radiography in the usual manner, and total renal function is tested by means of the two hours' phthalein test in connection with one or more blood-tests (cryoscopy, blood-urea), wherever indicated.

In some instances a codeine suppository gr.1 is administered per rectum half an hour before the appointed time of the cystoscopic sitting.

While the bladder, after anesthetization of the urethra, is cleansed and filled, the cystoscopic lamp, permeability of ureter catheters, etc., are tested, and the Brown-Buerger cystoscope containing the observation telescope is passed to the bladder. We advise that in the male introduction of the cystoscope precede indigocarmin injection, as in our experience occasionally color elimination has commenced before the difficulty of passing the cystoscopic shaft beyond the external sphincter could be overcome.

The patient receives 0.05 powdered indigocarmin, dissolved in 3cc of distilled water heated to boiling, in one of his arm-veins, and the time of injection is noted. The next few minutes are spent in routine cystoscopic observation of the bladder-cavum. Meatoscopy starts at about 3 minutes after injection, and time of onset of dye-elimination, intensity of color-index, character of spurt, etc., on either side, are noted. The telescope is now exchanged with the double catheterizing one, both ureters are catheterized, and collecting of bilateral renal urines is started at once. Two cc of ½ per cent. phloridzin solution are now injected intravenously, and time of injection noted, appearance of sugar is ascertained, without delay, by means of test-tubes containing small amounts of heated Fehling's solution. It is essential that determination of appearance of sugar-reaction should be done by separate observers for each side. As soon as the time of sugar appearance for both sides has been noted, the cystoscope is removed and collecting receptacles marked "sugar" placed at the end of the ureteral catheters.

The patient is now removed to the X-Ray room where radiography of the renal and ureteral regions is done. At the end of this procedure sufficient urine, as a rule, has been collected for quantitative bilateral sugar determination. The final act of the examination consists in bilateral thorium-pyelography, by means of the gravity-apparatus.

Though a larger and particularly a more diversified material of pathological cases will have to be investigated prior to final adoption of our proposed method of examination as a routine measure, we feel nevertheless, upon the basis of the satisfactory results obtained so far, justified in preliminarily formulating the following conclusions:

It should be the aim of the urologist, whenever feasible, to obtain a complete diagnosis in one sitting.

Conclusive comparative renal function can be rapidly determined in one sitting with the combination of the qualitative indigocarmin and the quantitative phloridzin and urea-tests, as only small amounts of renal urines, not exceeding 5cc including microscopical examination, are required.

This single cystoscopic sitting can be carried through with relatively little discomfort to the patient, as instrumentation, in most instances, does not exceed 15 minutes.

In fairly experienced hands, and at well managed clinics, the diagnostic sitting can be completed in about one hour.

1. B. A. Thomas and J. C. Birdsall, J. Am. Med. Assn., lxix, 21.
2. B. A. Thomas, J. Am. Med. Assn., lx 3, p. 185.
3. Surg. Gyn and Obstet., xxv 5, p. 561.
4. Chromocystoskopie, 1906, p. 5.
5. The intravenous phloridzin test, J. Am. Med. Assn., lxix, p. 1869.
6. L. C., p. 1871.
7. L. C., p. 1868.

THE PREVENTION OF CONGENITAL SYPHILIS BY ANTILUETIC PRENATAL THERAPY*

H. LISSER, A. B., M. D., San Francisco, Instructor in Medicine, University of California Medical School.

At a time when literally millions of able-bodied men are being slaughtered throughout the world and, consequently, repopulation of the largest and most important civilized communities is a very imminent and overwhelmingly important problem, —any measure that even in some small degree may lead to the hope of ensuring birth to numberless fetuses that would otherwise miscarry or be born dead at term, and that to some extent would ensure a greater length of life *after* birth to those born alive,—becomes at once a subject of more than mere scientific interest.

Accordingly, it is deemed fitting to report at this time a small series of cases which perhaps in themselves are of no great significance, but from which there may be deduced certain conservative conclusions which have at the present time the very widest application.

It is superfluous to take the time of the Society with any elaborate recital of statistics collected to show the enormous and appalling wastage of life that comes from syphilis in prospective mothers. They are familiar to all medical men. The percentages are variously estimated by different authorities with larger or smaller experience, but, whether accepting the alarming statistics of some or the more conservative estimates of others, the unanswerable fact remains—that a tremendous number of lives never see the light of day because of syphilis in the mother. I refer, of course, to the large number of miscarriages and especially to the very large proportion of premature births and still-births due to syphilis. And when we consider the problem of repopulating the world after this war, this colossal wastage should be prevented and it can be largely prevented. When we add to these the enormous number of children who actually come to term and are born alive, but with the handicap of inherited syphilis, we find that the majority do not pass through the first year of life. Of those who are fortunate enough, or unfortunate enough, to remain alive and become adults, numberless ones are maimed or crippled for their future life by blindness, deafness, deformities and other serious manifestations of congenital syphilis, as, for instance, idiocy and other grades of mental defect. Furthermore, this war, like all wars, will increase the syphilization of the world and the situation will accordingly be more acute than ever. For the nations at war, syphilis has become in truth a national peril.

We have to consider further the difficulties of anti-syphilitic treatment in congenital syphilis; by that I refer to the uncertainties that surround this treatment, since we are not able to decide as accurately how long treatment should be continued, nor is it possible in a fair percentage of cases to employ our remedies as effectively as in the adult. In any case, the treatment occupies a considerable time and is a great burden, expense, care and anxiety to the parents.

This is the age of prevention in medical research. Our energies are directed as far as possible toward prophylaxis instead of repair after the havoc has been wrought. In the prevention of congenital syphilis, there are three methods at our disposal, and only three.

These comprise, first, thorough treatment of syphilitic patients before marriage; second, preventing conception in syphilitic individuals who are already married during that period of the disease when it may be transmitted; third, thorough treatment of the pregnant mother before the birth of the child. That there would be fewer cases of congenital syphilis if infected parties postponed marriage until they had had sufficient specific treatment is quite obvious, but as this problem resolves itself into the proper treatment of acquired syphilis, it needs no further comment here. It is likewise apparent that married persons known to have the disease in its active stages should be warned that a child of theirs may inherit the disease, and it is therefore fitting and proper that they take reasonable precautions to prevent conception. Both of these measures, however, are beyond the control of the physician. Patients will marry before they should and have children when they should not. But when a pregnancy has occurred where either the father or mother is known to be luetic, it is incumbent upon the physician to institute most energetic treatment of the pregnant mother in the hope of preventing a syphilitic child. This paper is presented in order that this method may receive the recognition it deserves and be more generally adopted as a routine procedure.

It is interesting to compare the statistics of such antenatal therapy with the results of no therapy at all. With no treatment of maternal syphilis, the mortality of congenital syphilis after birth, even when the child is born alive, is enormous. In the first year of life Leduc estimates it at 71 per cent.; Zeissl at 80 per cent.; Bunch at 90 per cent; Markus at 90 per cent.; Hochsinger claims 93 per cent. of syphilitic children have diseases of the nervous system.

According to Galliot, when mothers are treated before pregnancy, but not during pregnancy, 82 per cent. of the resulting children are born dead.

Mercurial treatment of the *pregnant* mother has the following results to commend it: Of 217 infected pregnant women showing signs of active syphilis during their pregnancy, who were vigorously treated with mercury and iodides during their pregnancy, 25 per cent. of the resulting progeny were born alive, of whom 10 per cent. showed signs of syphilis. This is at once a striking improvement over no treatment at all.

Of 163 pregnant infected women, without signs of active lues, so-called latent lues, who likewise were vigorously treated with mercury and iodides during their pregnancy, 66 per cent. living children were born who were well clinically; 14 per cent. were born alive, but showed signs of congenital lues, and 19 per cent. were born dead. Pinard, Champetier de Rives, and Potocki, by prolonged treatment with mercury and potassium

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

iodide, obtained 76 per cent. of the children healthy.

Of 128 women with latent lues, who were treated before and during pregnancy with mercury and iodides, 88 per cent. living children, clinically well, resulted, the remainder showing signs of syphilis. These statistics are surely a strong argument in favor of the thorough treatment of the disease (Galliot).

But the effect of mercury, unless long-continued, is fleeting. This is illustrated in an astonishing way by the following case, reported by Fournier (Meyer). A syphilitic woman was pregnant 11 times. She had no treatment whatsoever during the first seven pregnancies, and the result was seven dead luetic children. During the eighth and ninth pregnancies, energetic mercurial treatment was given, and the result was two healthy children. No treatment was taken during the tenth pregnancy, and again a luetic child was born dead. Treatment during the eleventh pregnancy was successful in bringing forth a healthy child. Fournier concludes: "So powerful, yet so fleeting, is the effect of mercury that, if it were not immoral, I would like to try the experiment of alternately treating and not treating a syphilitic mother and alternately bringing into the world healthy and syphilitic children."

When salvarsan is combined with such mercurial therapy, the following results are obtained: Sauvage reporting 93 per cent. and Bourret and Fabre 100 per cent. cures. These latter statistics may be somewhat enthusiastic, for it must be admitted that many cases showing cengenital syphilis after reaching 6 to 20 years of age, show no specific manifestations whatsoever during the first few years of life. Most of the cases reported were only observed during the first few months or first year of life, and are therefore subject to this reservation. Nevertheless, it would seem that this method of antenatal therapy has much to support it and merits extensive trial.

With this idea in mind, about three and a half years ago, at the University of California Hospital, through the kindness and co-operation of, first, Dr. Slemons and now Dr. Frank Lynch, an attempt was made to discover syphilis in as large a number of pregnancies as possible and as early in the pregnancy as possible. To this end, a routine Wassermann was instituted in all women that registered in the obstetrical clinic immediately upon such registration. In addition to this, a brief history was taken of their previous ailments, which included some questionings regarding syphilitic manifestations; and a routine physical examination was made in the obstetrical clinic. Now I need not draw attention to the fact that undoubtedly some cases were overlooked. First, because many cases of syphilis give negative Wassermanns; second, because many women give no history of syphilis even after careful questioning, and, third, because many show no signs except upon most careful examination, and sometimes not even then. But a few cases were gathered together which form the basis of this paper. It was the custom to refer these cases to me in the Medical Clinic for further examination and as active treatment as could be instituted. It was not always possible to give these patients as intensive treatment as was desirable, though no effort was neglected in this direction, the importance of the procedure always being carefully explained to the patient. As far as possible, Wassermanns were taken at frequent intervals, and the children that resulted from these pregnancies were followed and repeatedly examined whenever possible. Unfortunately, despite every care and attention, some patients have been lost track of, but it will be hoped that the report of even a relatively small number of cases that were persistently followed will suggest a few important facts. Before presenting these cases, it is only fair to state that any sweeping conclusions at this time as to the ultimate value of this treatment would be injudicious and, in fact, reckless, because we all know that syphilitic mothers will occasionally have healthy children even without treatment, and that inherited syphilis sometimes does not develop in children until after the sixth or eighth year of life; sometimes, indeed, not even until the eighteenth or twentieth year (lues heriditaria tarda). If, therefore, we could have the opportunity of watching these children for twenty years, we would then be in a position to give a valid verdict of the success or failure of antenatal therapy in the prevention of congenital syphilis, for, of course, it has been made a rule that none of these children receive any anti-syphilitic treatment, unless syphilitic manifestations should appear. This must be done in order to avoid confusion in appraising results.

There were 17 mothers that received a little or a great deal of antenatal therapy during pregnancy. Two of the mothers had two pregnancies apiece. There, therefore, resulted 19 pregnancies. Two of these ended at the seventh month.

Let us dispose of these two first. The first patient's pregnancy began in January, 1917. She registered in the Clinic in July, 1917, and had at that time irregular pupils and a three plus positive Wassermann. She received from the middle of August to the middle of September 0.4 neosalvarsan and 4 mercury salicylate injections. Her pregnancy was complicated by high blood pressure up to 190/100 and albumen and casts, and accordingly in the middle of September the fetus was extracted by artificial methods inducing labor lasting two days—and the child born dead. Examination of the placenta, however, showed no evidence of syphilis. The other case came to the clinic in July, 1915, with positive Wassermann and definite history of recent secondary syphilis. She had not "felt life" for two weeks before coming to the clinic, and the fetal heart could not be heard at that time. She was given 0.4 old salvarsan and a few mercury inunctions. There was no evidence of fetal life after this treatment, and she was delivered in the middle of August of a dead macerated seven months premature syphilitic fetus. The first case mentioned was, therefore, handicapped by the complication of high blood pressure, albumen and casts, and the second case had no chance at all, since the fetus was dead when the mother came to the clinic.

Of the remaining 17 pregnancies, all came to

full term and all the children were born alive. One of these children has never been seen and one other was observed only for two weeks following birth. This child had a negative Wasserman and no signs of congenital syphilis at that time, but naturally both of these cases must be eliminated from consideration.

Of the remaining 15 pregnancies, one child died at the age of seven months. This child had had a negative Wasserman two months after birth and again six months after birth, and never showed any definite signs of syphilis. It was under very wretched hygienic conditions at home, including great poverty and very poor nourishment, and it remains an open question whether this child had syphilis or not. The mother had had one gram of old salvarsan and two pints of "mixed" during her pregnancy.

Of the remaining 14 children, two are now 8 years and 9 months, and 9 years old respectively. Their mothers have unquestionably had syphilis, since they still showed signs of the disease by positive Wassermann and physical examination during the last three years, and have received during this time anti-syphilitic treatment. Both these mothers gave a clean-cut definite history of primary lesion and secondary syphilis. One of them was carrying the child above referred to during the secondary stage of her disease, and received mercury injections every day throughout her pregnancy. This occurred in Paris. Her boy is now 9 years old, has never shown any signs of the disease and has had one negative luetin and four negative Wassermanns (all at the University of California Hospital) during the last five years, the last one in February, 1918. The other mother gave birth to a syphilitic child who is now in good general health, due to many, many years of anti-syphilitic treatment. He is now 13 years old and had interstitial keratitis and shows characteristic Hutchinsonian teeth. This mother took some salvarsan, and mercury rubs and potassium iodide incessantly during the later pregnancy of the boy reported in this series. This boy is now 8 years and 9 months old and has never shown any signs or symptoms of inherited syphilis, and has had four negative Wassermanns and a negative spinal fluid and a negative luetin.

The remaining 12 children have been observed for the following periods: Five have been followed for less than six months of life: namely, one for three, two for four, and two for five months. All of these children were healthy during the period of observation, showed no signs or symptoms of inherited syphilis, and have had one or more negative Wassermanns and luetins.

Three children have been under observation for between six months and one year, namely, 7, 9 and 11 months, and likewise have shown during this time no signs or symptoms of syphilis, and have had repeatedly negative Wassermanns and luetins.

One child has been observed for 13 months with the same happy result.

Three children have been observed for 2 years and 2 months; 2 years and 3 months; and 2 years and 6 months; with absolutely no signs or symptoms of syphilis, with very many negative Wassermanns and, of course, absolutely no antiluetic treatment.

It would not be appropriate on this occasion to burden you with the minute details of all these cases. This will be reserved for a more extended communication. Suffice it to say now that of the 15 children that have been followed since their birth for periods varying between three months and nine years, only one has died, which may or may not have been due to syphilis, and all the remaining, when last heard from, were alive and well.

It is interesting to record that we have a report of microscopic examination of the placenta in 10 cases, only one of which was reported as positive. This patient had only 0.4 of salvarsan and 4 mercury salicylate injections and three weeks of mercury rubs during her pregnancy. Her child is now 5 months old.

Now a word as to the antenatal therapy itself. It consists of essentially the same treatment as that of acquired syphilis, namely, injections of salvarsan or neosalvarsan, mercury salicylate injections or mercury inunctions and potassium iodide. It is well to emphasize here without reservation of any kind that pregnancy in itself is in no way whatsoever a contraindication to such treatment nor even to any limitations of such treatment. The contraindications to the administration of salvarsan are precisely those that obtain for non-pregnant syphilitic women and nothing else, and the same applies to mercurial therapy. The dosage of salvarsan, mercury and iodides is the same as employed in non-pregnant women.

Two of the women in this series had very bad cardiac complications; one of these had mitral stenosis with pulmonary insufficiency and auricular fibrillation, which naturally prevented the administration of any salvarsan at all. The other mother received 5 injections of salvarsan, 1.4 grams, despite the mitral insufficiency and stenosis, which was partially decompensated. On account of these cardiac complications, both these women underwent Caesarean section at full term with uneventful convalescence. Omitting these two Caesarean sections, the remaining pregnancies—fifteen—progressed normally to full term and had absolutely normal labors and normal puerperiums.

It is most desirable to emphasize again that antisyphilitic treatment of the pregnant mother does not in any way interfere with the normal course of pregnancy. These results, therefore, correspond precisely with those of Findley and Robinson, who expressed themselves in 1915 in the Glasgow Medical Journal as follows: "In no case was the course of pregnancy interrupted, and the mothers did not seem to suffer much from the treatment. The mothers, as a rule, expressed themselves as feeling better during this than during any of their previous pregnancies."

Special attention should be called to two cases. One mother had been married eight years, and during this time had had seven spontaneous miscarriages. The child reported in this series fol-

lowed upon these miscarriages and, as you see, through antenatal therapy, not only went to term, but was born alive and is now seven months old, alive and well, weighing 23 pounds, sits alone, has several teeth and has had a negative Wassermann and luetin. She received 6 full doses of old salvarsan, 17 mercury salicylate injections, and potassium iodide all the time, and one week of mercury inunctions. Another mother in 1907, 1910, 1912, and 1915, gave birth to children, all of whom have congenital syphilis, the first three having almost persistently positive Wassermanns and the fourth one having a negative Wassermann because antisyphilitic treatment was instituted three weeks after birth. This mother's Wassermann was 3 plus positive in May, 1916, and she had never had any antiluetic treatment. She then received 20 mercury salicylate injections, and in January, 1917, her Wassermann was negative. In July, 1917, she was five months pregnant and received 0.6 and 0.3 old salvarsan and 2 mercury salicylate injections. She was delivered October, 1917, after a normal pregnancy and a normal labor, of a normal child, who is now five months old and has had two negative Wassermanns and a negative luetin, shows no signs or symptoms of lues, and weighs 13 pounds 7 ounces. The mother's placenta was normal and her puerperium was normal. This is a classical example of what antenatal therapy can accomplish.

The results of antenatal therapy in this small group of syphilitic mothers has, therefore, been fairly satisfactory and at least most encouraging. It would, of course, be extremely rash to conclude that *thorough* intensive anti-syphilitic treatment of *every* luetic mother *during* her pregnancy would mean the vanishing of congenital lues from clinical experience, though it is not beyond the limits of possibility. But surely the most conservative will agree that it would materially decrease the number of syphilitic miscarriages and still births, prolong the life of the offspring, and diminish considerably the incidence and the severity of congenital syphilis. None but the most skeptical pessimist will deny this. If one admits, then, as this series of cases seems to suggest, that this treatment, so far as we can determine, is not accompanied by harmful effects upon either mother or child, and that it carries with it a possibility of producing a live, healthy child at full term who will not inherit syphilis, we can at once realize the tremendous significance and importance of such a procedure, if developed throughout the world on a large scale. An international propaganda amidst the medical profession at this time and to this end would result in incalculable benefit to posterity.

To visualize this problem concretely, one need but note these lines of Bartlett in a recent article on the effect of syphilis on birth mortality. He writes:

"A carefully organized propagandum is under way in all the nations at war to encourage childbearing. It is necessary, therefore, to check the spread of syphilis among the soldiers if they are to do their share in renewing the races after the war. The following figures need no elucidation in this matter of race destruction and race renewal. Pautrier stated that in 1916 there were 200,000 soldiers infected with acute syphilis along the French battle line alone. If each of these cases account for only two still births, the infection will account for 400,000 births."

Gaucher reckons that the disease has increased in Paris 66 per cent. during the war.

Again—taking statistics of many kinds from many authors, and shuffling them all together, will result roughly in the following calamity: If 100 untreated syphilitic women have 300 pregnancies, 30 children will reach adult life free from syphilis, namely 10 per cent. The remaining 90 per cent. will comprise those that miscarried, were born dead, died during the first few years of life, or continued alive but infected with syphilis.

The importance of treating acquired syphilis thoroughly and preventing its spread by all possible public health measures such as have been so ably and effectively instituted by Dr. Irvine as Director of the Venereal Disease Bureau of the California State Board of Health—all such procedures are of tremendous value and are not being underestimated. They will have as their inevitable consequence a corresponding reduction in the incidence of congenital syphilis as well. But when all is said and done by any and every such method, there will still remain great numbers of syphilitic women who will give birth to syphilitic children. And the only safe and reasonably sure method of attacking this problem directly, namely, the prevention of congenital syphilis, is by intensive treatment of the syphilitic mother *during* as well as before her pregnancy.

CONCLUSIONS.

1. There are many cases of congenital syphilis in the world.
2. Most cases of congenital syphilis have been preceded by two or three miscarriages, premature births or still-born children due to syphilis.
3. The vital problem of repopulating the world after this war involves the serious consideration of this appalling wastage of life.
4. Proper treatment of acquired syphilis before pregnancy will to a considerable extent diminish this waste, which can at best be only partially controlled.
5. But intensive treatment of every syphilitic mother during her pregnancy **will**
   a. **Prevent** miscarriages, premature births, and still births due to syphilis, in the vast majority of cases.
   b. **Produce** a live child at full term who will not develop congenital syphilis, in the majority of cases.
6. Such treatment does not interfere with the normal course of pregnancy, labor or puerperium.
7. Such antenatal therapy should be widely advocated by medical men of prominence and influence, in order that it may become a well-established routine procedure.
8. Immediate widespread adoption of this method will insure a large increase in the future population of the world.

It would not be proper to close this paper without taking the opportunity of thanking Dr. Slemons and Dr. Lynch for their generous cooperation in placing their clinics at my disposal and in giving me a free hand therein; Dr. Schmitt and Dr. Harvey for their reliable Wassermann

tests; Miss Coats, Dr. Lynch's secretary, for her cordial assistance in assembling and checking up the many details; and the several members of the children's, obstetrical and social service departments for their hearty good-will and help. It is apparent to every one undertaking a work of this sort that a thorough study and control of even such a small series as this requires the co-operation of many persons.

RESULTS FOLLOWING OPERATIVE TREATMENT OF PELVIC INFLAMMATORY DISEASE IN THE STANFORD UNIVERSITY CLINIC.*

By JOHN A. SPERRY, San Francisco.

The subject of pelvic inflammatory disease has been written about since the year 1500 B. C. There are very few meetings of gynecologists or obstetricians at which this subject is not touched upon in some major or minor way.

I fear that further discussion may be considered trite and commonplace. However, inasmuch as the statistics I have gathered show that we, in our Clinic, at least, are very far from having found what may be considered an entirely satisfactory method of dealing with these cases, it will do no harm to point out some of the weak and strong points that have been shown in the collection of statistics, to be quoted in this paper.

As in many medical problems, efficient preventive measures are, to my mind, in dealing with this subject, of the utmost importance. I think we will see, at no far distant date, a very much more radical prophylactic campaign waged against the infection of innocent and unsuspecting women with marital gonorrhea, and the tragedies following criminal abortion.

Education and judicious legislation will play equal parts. I think one rational and sane legislative step would be a measure requiring the compulsory examination of every male, before marriage, by a qualified urologist, and the presentation of his gonorrhea-free health certificate at the Marriage License Bureau. Those of us, who have seen so many honeymoon appendices, and who have daughters growing up, will not scoff at this suggestion which, to some of you, may seem quixotic.

It may be well here to go into the causes of salpingitis. Andrews, of Chicago, made an exhaustive study of this subject, searching the literature for all reported cases. I give the following table from his article, which is based upon laboratory findings.†

A. ANIMAL PARASITES.
- a. Echinococcus.
- b. Blastomyces.
- c. Oxyuris vermicularis.
- d. Ascaris lumbricoides.

B. VEGETABLE PARASITES.

1. Pus producing bacteria.
   - a. Gonococcus.
   - b. Streptococcus.
   - c. Straphylococcus.
   - d. Pneumococcus.
   - e. Bacillus coli communis.
   - f. Typhoid bacillus.
   - g. Bacillus of malignant edema.
   - h. Bacillus of Friedlander.
   - i. Saprophytes (non-pathogenic).
2. Infectious granulomata.
   - a. Tubercle bacillus.
   - b. Virus of syphilis.
   - c. Actinomyces.

The occurrence of animal parasites is very rare.

In 906 cases, collected from various recognized clinics of this country and abroad, tubercular infections in the tubes were encountered 40 times, or 4.4 per cent.

As a result of bacterial examination in 684 cases of pyosalpynx, the following statistics were gathered:

Sterile	55	per cent.
Only Saprophytes	6	" "
Gonococcus	22.5	" "
Staphylo and Streptococcus	12	" "
Pneumococcus	2	" "
Bacilli Coli Communis	2.5	" "

The records in the Stanford Women's Clinic show one hundred and five cases of pelvic inflammatory disease, operated upon. There were, in this series, two deaths; one followed hysterectomy for chronic pelvic inflammatory disease. She died from pneumonia, on the third day. The other followed left salpingo-oophorectomy and curetage. Diagnosis was tubo-ovarian abscess left, with chronic appendicitis. Patient died on the second day following operation, with general peritonitis.

Questionnaires were sent to one hundred and three patients. Twenty-seven replies were received. I have tabulated the replies in regard to the general health and to four of the cardinal symptoms found in such cases, i. e., menstrual symptoms, backache, pain, and nervousness. In referring to pain, unless otherwise mentioned, it will be understood that the pain is abdominal and in one or the other, or both of the iliac fossae.

In nearly all of the conservative operations, some type of uterine suspension was done. The length of time elapsed, since operation, varies from three to nine months.

These operations were done by the several members of the Clinical Staff and represent the various judgments of different operators.

The tables follow on page 389.

The conservative operations show the following statistics: There were eighteen such cases; six of these showed no backache at time of operation. Of the remaining twelve who had backache, five cases, or 41.6 per cent., were cured. Two cases, or 16.3 per cent., were improved. Three cases, or 25 per cent., were unimproved, and two cases were made worse.

All eighteen cases had pain. Eight of these, or 44 per cent., were cured of their pain by operation. Three, or 16.5 per cent., were improved. Two, or 11 per cent., were unimproved; and five, or 27.5 per cent., were made worse.

Seventeen, out of eighteen, of the conservative cases were suffering from nervousness at the time of operation; of these only one case, or 5.8 per cent., was cured. Three cases, or 17.4 per cent., were improved. Seven cases, or 40.6 per cent.,

---

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

† Andrews, American Journal of Obstetrics, 1904, Vol. 49.

ONE OR BOTH TUBES REMOVED. BOTH OVARIES LEFT.

Case No.	Periods.	Backache.	Pain.	Nervousness.	Gen'l. Health.
11334.	Same.	Never any.	Cured.	Same.	Same.
24533.	Shorter; pain better.	Cured.	Cured.	Worse.	Better.
41901.	Pain better.	Never any.	Cured.	Never nervous.	Better.
48071.*	Periods longer; pain worse.	Worse.	Worse.	Worse.	Worse.
54145.	Pain better.	Never any.	Better.	Same.	Better.

* In answer to inquiry, this patient was very glad she had her operation.

ONE OVARY AND ONE OR BOTH TUBES REMOVED.

Case No.	Periods.	Backache.	Pain.	Nervousness.	Gen'l. Health.
50143.** Acute.	Less pain.	Better.	Cured.	Worse.	Better.
43081.	Shorter; pain cured.	Cured.	Cured.	Cured.	Much better.
5822.	Now regular; more pain.	Better.	Better.	Worse.	Better.
17141.	Menopause.	Cured.	Cured.	Better.	Better.
17551.	Menopause.	Worse.	Old pain cured; new pain worse.	Worse.	Slightly improved.
6177.	Pain cured.	Cured.	Cured.	Better.	Much better.
30089.	Menorrhagia; pain cured.	Cured.	Cured.	Better.	Much better.
34706.	Pain same; irregular since op.	Same.	Worse; new pain on other side.	Same.	Worse.
Mrs. T.* S. F. Hosp. acute.	Never painful.	Never any.	Cured; new pain on other side.	Same.	Same
43539.	Last longer; pain better.	Same.	Better; now both sides.	Worse.	Little better.
41851.	Menopause.	Never any.	Worse.	Same.	Same.
40662.	Never painful	Never any.	Pain, at times, worse.	Same.	Same.
28006.	Same.	Same.	Same.	Same.	Same.

** Some months later, mass with pain on the other side.
* Some months later, mass with pain on the other side.

HYSTERECTOMY CONSERVATIVE (ONE OVARY OR ONE OVARY & ONE TUBE LEFT).

Case No.	Periods.	Backache.	Pain.	Nervousness.	Gen'l. Health.
8215.*	———	Same.	Better, but both sides now.	Much worse.	Worse.
29998.	———	Same.	Cured.	Worse.	Better.
52525.	———	Never any.	Cured.	Cured.	Fine
36278.	———	Better	Better.	Better.	Much improved.
12552.	———	None before op. slight now.	Cured.	Better.	Much improved.

* Both ovaries left in; patient approaching normal menopause.

HYSTERECTOMY. (DOUBLE SALPINGO-OOPHORECTOMY).

Case No.	Periods.	Backache.	Pain.	Nervousness.	Gen'l. Health.
57495.	———	Cured.	Cured.	Worse.	Better.
44353.	———	Never any	Cured.	Never any.	Fine
Miss B. S. F. Hosp.*		Never any.	Better.	Better.	Good.

* Acute pyosalpinx; age, 22 years.

were unimproved; and six cases, or 34.8 per cent., were made worse.

It is worthy of note that the nervousness was increased in over one-third of these cases, in spite of the fact that one, or both ovaries, were left in, and the menstrual function uninterfered with.

In this group the general health was improved in eleven, or 60.5 per cent.; remained the same in five, or 25.5 per cent.; and was made worse in two, or 11 per cent.

Only three acute cases operated upon are recorded. On one, hysterectomy and double salpingo-oophorectomy was done. She was cured of all symptoms, except nervousness. The other two, who had conservative operations, as shown in the tables, returned some months later. each with a mass in the pelvis.

We were able to trace only eight hysterectomies; five of these were conservative, and three were with the removal of both ovaries. I will give the statistics of both groups together.

In regard to backache, three never showed this symptom. Of the five who had backache, one was cured; one was improved; two remained the same; and one was made worse.

The abdominal pain was cured in six, or 75 per cent., of these cases, and improved in two, or 25 per cent. In the three cases, in which the uterus and both ovaries were removed, all were cured of abdominal pain.

The nervousness was cured in one case; improved in three, and made worse in three. One never complained of nervous symptoms before or after operation, and it is significant to note that she was in the group in which both ovaries and uterus were removed.

The general health was improved in seven, or 87.5 per cent. of these cases.

There was one patient, number 40194, in whom the appendages were removed on both sides and the uterus left in situ. She was improved for a short while. Following the return of her symptoms, she consulted someone else, and had a second operation.

Very few such operations have been done in our clinic, and I believe no more will be, inasmuch as the operation is without any logical basis, as a diseased uterus remaining, after the tubes and ovaries have been removed, serves no purpose other than to cause possible pain.

COMPARATIVE RESULTS OF CONSERVATIVE AND RADICAL OPERATIONS.

Backache:

According to the figures, quoted above, the re-

sults, so far as backache is concerned, remains about the same, no matter what type of operation was done, showing an average of about 35 per cent. of cures. About one-half the cases remained the same, or were made worse.

I think we can safely deduct, from these facts, that a great number of backaches encountered, in pelvic inflammatory lesions, are not due to pelvic inflammatory trouble, but to some other factor; and that all of the other possible causes should be investigated carefully, before operation.

Abdominal Pain:

On the other hand, abdominal pain was cured in all the hysterectomy cases, accompanied by the removal of both adnexae. In conservative hysterectomy—i e., the removal of the uterus, with one or both ovaries remaining—60 per cent. were cured, or improved; 20 per cent. were unimproved; and 20 per cent. were made worse.

From these figures, it is to be expected that the prognosis, in regard to relief of abdominal pain, will follow closely the degree of radicalism, or conservatism, of the operation; the more radical the operation, the greater the probability of entire relief fom pain.

Nervousness:

In the conservative operations, 5.8 per cent. were cured; 17 per cent. improved; 40 per cent. were unimproved; and 34 per cent. made worse. In hysterectomy, with double oophorectomy, or in which one or both ovaries were left in, 14.2 were cured; 42.6 improved; and 42.6 were made worse.

As noted above, one case, who never had any nervousness, after a complete operation, maintained her equilibrium, showing no effect from the removal of the uterus and the ovaries.

General Health:

In the conservative operation, the general health was improved in 60 per cent.; same in 25 per cent.; and made worse in 11 per cent. After hysterectomy, improved in 87 per cent.; and made worse in 12.5 per cent.

The treatment of acute pelvic infections, to-day, I believe, is generally limited to non-operative methods, unless there is considerable pus formation, or a rapidly spreading peritonitis. Coffey is one notable exception; I believe very few men agree with him in his quarantine pack idea.

C. H. Stratz [1] says that of eight hundred cases of pelvic inflammatory disease, seen in his clinic, only twenty have been operated upon. This includes all types, the chronic, as well as the acute.

John G. Clarke [2] agrees most emphatically, and says: "I am radically in favor of conservative measures in all classes of cases in which improvement may be secured through temporizing measures, before resorting to operative methods of treatment." Clarke, further, quotes Pincus, who agrees with this attitude; also Freund, who has been very active as an operator, and who cannot be looked upon as unduly timid, who speaks favorably of the possibilities of conservative treatment of even such a condition as pyosalpinx.

In the early stages, where there is elevation of temperature, rapid pulse, and the symptoms of acute pelvic peritonitis, these patients should be given a gentle antiseptic douche twice a day; ice-cap on the lower abdomen; Fowler's position; and kept on liquid diet.

As soon as the temperature subsides, and the constitutional symptoms disappear, measures should be begun to promote absorption of the products of inflammation and to increase the general resistance of the patient.

The local condition, at this stage, is best treated by pushing the application of heat. In conjunction with prolonged hot douches of large amounts, two or three times per day; the application of heat to the lower abdomen, over a period of fifteen to twenty minutes, twice a day, by means of some of the various electric baking apparatus, should be made.

Lockhart reports a very satisfactory series of cases so treated in the Montreal General Hospital, and I have seen some remarkable results in the Christiania University Lying-in Hospital.

This method is particularly adaptable to those severe puerperal infections characterized by board-like masses in the pelvis, which, quite frequently, rise up into the abdomen; sometimes reaching or going above the umbilicus.

I have seen several such cases, ill-advisedly operated upon; having, myself, contributed to the death of one woman, through such an operation.

Brown Miller [3] reports a case of puerperal infection of this type, in whom, six years after the original infection, active virulent streptococci were found in the still-existing mass.

Abdominal operation will, unquestionably, spread this infection over the peritoneum, which Nature has, up to this time, protected; and in cases, who do not die, the after results, and frequent complications are most disagreeable.

Fresh air, sunlight, good feeding, and a strict attention to the personal hygiene are equally important. I think we all concur that, in severe tonsil infections, or infections of the chest, these measures would be unquestionably enforced, where possible. Why not be rational and fight an infection, elsewhere in the body, by the same means?

I think, on reflection, you will remember many cases, in your experience, in which these very important considerations have been entirely overlooked.

Accumulations of pus in the pelvis, requiring drainage, should be drained, when possible, by puncture through the cul-de-sac. The keynote of the successful termination of such cases is to pack the cavity loosely, while keeping the puncture wound open with a very large cigar drain. These patients should all be placed in the Fowler position to facilitate drainage. As a general rule, the drainage tract should be kept open twelve to fourteen days.

Before leaving the subject of acute pelvic in-

1. Zeitschrift-fur Geburts Hulfe and Gynokologie, Vol. xlii, 1900.

2. American Gynecological & Obstetrical Journal, Vol. 16, 1900.

3. Reported before the Washington Gynecological & Obstetrical Society, in 1904. American Journal of Obstetrics, Vol. 50.

flammatories, I think a word in regard to promiscuous curettage is fitting. The time has been, when every bleeding uterus was promptly curetted; and unfortunately, among a few, this custom still persists.

One of the most constant symptoms of pelvic inflammatory disease is uterine bleeding.

No other mucous membrane in the body, which, when acutely inflamed, is subjected to sudden and violent destruction by means of the curet, thereby opening the lymphatics and blood vessels and spreading the infection to distant parts. There is no excuse for such procedure in these cases.

The decision, as to whether operation should, or should not, he undertaken, in chronic cases, should depend, I think, upon the extent of the symptoms and the sociological condition of the patient. The mere fact that we stumble across adherent tubes and ovaries, and possibly, a retroverted uterus, in a woman who consults us for a moderate backache, or occasional abdominal pain, by no means warrants an operation; the outcome of which, at least, is problematical, so far as the relief of her minor symptoms is concerned. It is possible, on the other hand, that they may be made worse, as shown by the foregoing statistics.

In the case of women who earn their daily bread, and in whom the symptoms are severe enough to incapacitate them from time to time, unquestionably, operation should be resorted to.

This is equally true of those more fortunate women who are able to afford rest and nursing, but in this type the necessity for operation is not so great, and is largely a matter of individual judgment.

After one or more severe exacerbations, operation is, I think, indicated. Sufficient time should elapse, however, after such a flare-up to allow of preparatory treatment and subsidence of the temperature.

Clarke and Norris,[4] in a study of the treatment of pelvic inflammatory lesions, in the University of Pennsylvania Hospital, found that in hysterectomies, performed upon one hundred cases, before 1910, in whom there had been no preparatory treatment, there was a mortality of 6 per cent. following operation. In one hundred and fifteen cases, operated upon subsequently, but who went through a course of rest and palliative treatment before operation, there were no deaths.

From the rather remarkable results of our statistics, and although they are based upon a relatively small number of cases, there is no doubt, in my mind, and this coincides with my own personal experience, that the more radical operations give the greater satisfaction in the long run. This is particularly true in working women who can ill-afford second operations and periods of rest.

I believe we overestimate the extent of the nervous symptoms following the removal of both ovaries; also, the beneficent results, generally considered to be obtained by the retention of the ovaries following hysterectomy, are overestimated.

Graves,[5] an authority whose opinion cannot be lightly put aside, writing on "Retention of Ovarian Tissue after Hysterectomy," feels that the nervous manifestations following total ablation operations is no worse than the nervous symptoms following conservative operations in which the uterus has been removed. He has investigated the cases operated upon hy him, and finds that, in two hundred and thirty-three cases, in which total operation was done, 80 per cent. had nervous symptoms. In twenty-six cases, in which one or both ovaries were left in situ, 81 per cent. had nervous symptoms.

Graves, further, quotes Walthard, who finds that the various nervous symptoms occurred most commonly and were worse in women approaching or passing through the natural menopause, ascribing this fact to the greater instability of the nervous system at this critical period of life. I have found this, also, true in my experience, although it has been long believed by many gynecologists that the younger the patient the more severe the symptoms.

Clarke, very appropriately, draws attention to the fact that, after total ahlation operations, the narrowing of the vagina and vulva is to be dealt with; and in nulliparous women, not infrequently, results in a hopeless dysparunia. In parous women, with moderately relaxed outlets, this should be horne in mind, and repair operations should not be undertaken unless there is an absolute necessity.

I am aware of the fact that the statistics, on which this article is based, are not large. However, I believe the number of cases of each class is sufficient to warrant my conclusions.

4. Surgery, Gynecology & Obstetrics, July, 1917, Vol. 25, No. 1.

5. Surgery, Gynecology & Obstetrics, Vol. 25, No. 3.

TRAINING OF FIXATION AND FUSION IN STRABISMUS.*

By KASPAR PISCHEL, M. D., San Francisco.

First of all I must confess that I have nothing new to offer. As an excuse for bringing hefore you facts which you all know, accept the observation that we sometimes, in the nervous search for new things, overlook old, reliable methods. Especially is this true when our attention is attracted by new operative procedures. I will not read a long paper, I will only exemplify the short statement of the synopsis by the history of a few cases.

Training will often prevent latent strabismus from becoming manifest and may ohviate an operation in manifest strabismus. If an operation is found necessary, better results will be insured by the improvement of the sight of the squinting eye and by the increase of the fusion power.

STRABISMUS LATENS.

Girl 5 years old (Journal 3018), September, 1914.

History: For six months following whooping cough left eye occasionally turns in.

Vision: Right eye 5/5 hooks. Left eye 5/60 hooks. Under atropin right eye +6. 5/5. left eye +6. 5/30. On perimeter no deviation. Tests for Heterophoria unreliable. Stereoscope: sees with both eyes, but binocular only with double pictures.

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

Ordered: Bandage of right eye. Later stereoscopic exercises.

November 1915, after about one year's work. Vision: in both eyes with +6.< 5/4. Esophoria 1; in 35 cm orthophoria. Stereoscope: binocular vision.

April 10, 1918. Vision: right eye with +6. 5/4, left eye +5.< 5/4.

STRABISMUS CONVERGENS ALTERNANS.

Girl 5 years old (Journal 787), April 1908.

History: Since 2½ years old eyes turn in in spite of glasses.

Vision: Right eye +2. 5/5. Left eye +3. 5/10. On perimeter: without glasses right eye turns in 40°, left eye 30°. With glasses right eye turns in 20°, left eye 20°. Under atropin right eye +3.50< 5/5, left eye +3.50< 5/5. Ordered: Stereoscopic exercises.

August 1912. Vision: right eye +3.50<5/4, left eye +3.50< 5/9. Orthophoria. Stereoscope: binocular vision.

July 1913. Vision: right eye +3.50< 5/4, left eye +3.50< 5/4. Orthophoria. Stereoscope: binocular vision.

February 1917. Vision: right eye +3.50<5/4, left eye +3.50<5/4. Esophoria 3; 35 cm orthophoria. Stereoscope: binocular vision.

STRABISMUS CONVERGENS SINISTER.

Boy 12 years old (Journal 225), December 1906.

History: Left eye turns in since babyhood.

Vision: right eye <5/9, with glasses <5/6; left eye 3/50, with glasses <5/30. On perimeter left eye turns in with or without glasses 40°. Prescribed after Atropin: right eye +3.=cyl.+2. Axis Vertical <5/6. left eye +3.=cyl.+2.5 Axis Vert <5/30. Ordered: Bandage of right eye. Later stereoscopic exercises.

February 1907. Vision: right eye <5/4; left eye 5/30. Left eye turns in 15°. Stereoscope: binocular vision.

April 1907. By some effort orthophoria and binocular vision. When he neglected the exercises the sight of the left eye fell down and the strabismus returned.

October 1914. Vision: right eye <5/5; left eye 5/21. Esophoria 5, 35 cm Esophoria 4. Stereoscope: binocular vision.

STRABISMUS DIVERGENS SINISTER.

Girl 13 years old (Journal 14655), October 1905.

History: Left eye always turned out like that of her father, one older sister and brother.

Vision: under atropin right eye +1.25<5/3, left eye +2.50=cyl.+0.50 Axis horizontal <5/4. Prescribed: right eye +0.75, left eye +1.75=cyl.+0.50 Axis horizontal and prisms for stereoscopic exercises. On perimeter left eye turns out 30°. Stereoscope: no binocular vision.

December 1906. Vision: right eye 5/3, left eye <5/4. Esophoria 2, 35 cm orthophoria. Stereoscope: binocular vision.

Returned July 14, 1914, with this history: In 1910 the left eye was operated in Lausanne, probably advancement of rectus internus was done. Eyes were straight for a while, now left eye shoots out when tired.

Exophoria 30, in 35 cm Exophoria 30; stereoscope: no binocular vision. Amblyoscope: binocular vision.

After Homatropia prescribed: right eye +0.25 Axis Vertical <5/3, left eye +1.0=cyl.+0.25 Axis horizontal <5/3. Ordered exercises with prisms and stereoscope.

July 31, 1914. Orthophoria, Stereoscope: binocular vision.

STRABISMUS DIVERGENS IN A GROWN PERSON.

Man 27 years old (Journal 1264), May 1909.

History: Left could never see well. Always turned out.

Vision: right eye 5/4, left eye 5/60. On perimeter left eye turns out 30°. Prescribed after Homatropia: right eye cyl.+0.25 Axis Vert 5/4, left eye +3.0=cyl.+1.5 Axis Vertical 5/30. For reading exercises: right eye cover, left eye +6.

June 1909. Vision: right eye 5/4, left eye <5/15, reads with +4. added 15/50. On perimeter turns out 30°. Tenotomy of Rectus externus. A few days later no deviation on perimeter when fixating with an effort, but soon left eye turns out about 20°. Ordered exercises.

August 1909. No deviation. Orthophoria with inclination to exophoria. Stereoscope: binocular vision, but image of left eye moves a good deal.

Book Reviews

The Surgical Clinics of Chicago. Volume 2, Number 2 (April, 1918). Octavo of 208 pages, 79 illustrations. Philadelphia and London: W. B. Saunders Company. 1918. Published bi-monthly. Price per year: Paper, $10.00; Cloth, $14.00.

Contents.—A. E. Halstead: Surgical treatment facial paralysis. A. E. Halstead and G. F. Dick: Syringomyelia with arthropathy. D. B. Phemister: Bone transplantation for repair of mandible. R. T. Vaughan: Acute osteomyelitis of sternum. Spontaneous rupture ventral hernia in old scar. H. L. Kretschmer: Carcinoma of penis. V. D. Lespinasse: Impotence; treatment by transplantation testicle. J. L. Porter: Tendoplasty for paralytic talipes valgus. P. H. Kreuscher: Hallux valgus. Bow-legs and open operation. W. M. Harsha: Demonstration of cases. R. L. Moodie: Pathologic lesions among extinct animals. H. M. Richter: Head injuries. J. H. Mitchell: Extragenital chancre as complication of minor surgery. T. J. Watkins: Palpation of kidneys. P. Oliver: Hodgkin's disease. Metastatic sarcoma of lung. Sarcoma of upper end tibia. Giant-celled sarcoma of ulna. D. C. Strauss: Extensive compound elevated skull fracture, laceration brain. A. J. Ochsner: Gall-stones. C. Beck: Musculospiral palsy treated by neuroplasty and tendon transplantation. A. D. Bevan: Salivary calculi. Carcinoma of stomach. J. Brennemann: Ratbite fever.

Lecture Course to Physicians on Natural Methods in Diagnosis and Treatment. By Geo. S. White. 7th edition. Published by author, Los Angeles. 1918.

A book of some 1400 pages, spelt in a semiphonetic way. It sets forth theories that disease may be diagnosed by the deflection of a magnetic needle, variation of "auras," variation in the pitch of vibrating air columns, etc. Interspersed with these theories is much extraneous matter,—paeans of praise on the city of Los Angeles, description of office equipment, and a great deal of abuse of the medical profession, vaccination and the germ-theory, and modern laboratory methods. In a section on the latter, White mentions sending the blood of a hen to a certain nameless laboratory which makes "electronic" blood tests and getting in return a report of gonorrhea and syphilis. To comment further on a book that treats pus-appendicitis with a Kromayer lamp is superfluous.

L. E.

Clinical Diagnosis by Means of Laboratory Methods. By Chas. E. Simon. Ninth edition. Philadelphia: Lea & Febiger. 1918. Price, $6.00.

It is interesting to note that the familiar and useful form of this standard American text-book has undergone very little change in all of the nine editions that its deserved popularity demanded.

Professor Simon has added only the small num-

ber of items necessary to bring the work up to date, and also, we find a number of new and well executed illustrations, many of them in color.

The change made in the seventh edition, the division of the subject matter into two parts, clinical methods and the application of laboratory findings to diagnosis has been carried over into this edition and is one of the especially valuable features of the book. G. H. T.

Spleen and Anemia. By R. M. Pearce with assistance of E. B. Krumbhaar and C. H. Frazier. 419 pages. Philadelphia: Lippincott. 1918.

This book is a presentation of Pearce's experimental work on the relation of the spleen to blood destruction and regeneration and to haemolytic jaundice. The author notes a constant anaemia after splenectomy, with increased resistance of the red blood cells to various haemolytic agents. His experiments and controls are reported in great detail. Krumbhaar has added four short clinical chapters, with notes on the classification of splenomegalies, and on various laboratory investigations in splenic disease. Frazier contributes a short chapter on surgical treatment. The book contains a bibliography of 486 numbers. It will interest clinical and scientific investigators of the normal and abnormal spleen. L. E.

Clinical Medicine. By Wm. H. Thomson. Second edition. Philadelphia: Saunders. 1918.

This text-book seems to deserve classification among the huge list of works on medicine that should be designated as commentaries on the art of medicine, rather than as text-books, because into it enters so much that is purely in the nature of personal comment and individual observation.

To recommend such a work as a text-book requires the reservation that the book is highly fragmentary in parts and more characteristic of the viewpoint of the writer than a reflection of the collated experience in medical science to date. As such it may find a place in the libraries of those who enjoy reflecting upon the lectures of a good clinician, but for the purpose of reference work and clinical guide, it might be compared to a work on mathematics that enunciates problems and their solutions without the formality of the intermediate steps and deductions whereby the conclusions are reached. G. H. T.

The Medical Clinics of North America. Volume 1, Number 5 (The Chicago Number, March, 1918). Octavo of 241 pages, 35 illustrations. Philadelphia and London: W. B. Saunders Company. 1918. Published bi-monthly. Price per year: Paper, $10.00; Cloth, $14.00.

Contents.—C. L. Mix: Aortic regurgitation, aortitis, and aneurysm on a syphilitic basis. S. Strouse: Juvenile diabetes in twins. Karell treatment of edema. Importance of details in angina pectoris. C. A. Elliott: Radium treatment of leukemia. Fredk. Tice: Epidemic respiratory infection. C. S. Williamson: Polycythemia—Vaquez's disease. M. M. Portis: Lesions of the right upper quadrant abdomen. A. R. Elliott: Syphilis of aorta. J. C. Friedman: Reflex gastric disturbance and epigastric pain. J. H. Hess: Tuberculin skin reactions in diagnosis tuberculosis in childhood. Frank Wright: Nephritis. A. F. Byfield: Splenomegaly and cirrhosis liver. R. C. Hamill: Insomnia. Hysteria. I. A. Abt: Asthma in children. M. J. Hubeny: Roentgen examination of appendix. H. F. Helmholz: Pyelitis in newborn.

Syphilis and Public Health. By Edward B. Vedder. Philadelphia: Lea & Febiger. 1918. Price, $2.25.

Adequately to review such a brilliant medico-sociological survey of the syphilis question would demand a full abstract of Col. Vedder's monograph. The small volume is saturated with a concentrated exposition of all that has been done in syphilis investigation in recent years, checked up by the author's extensive and authoritative work in this field. Among the interesting facts cited, mention can be made of the percentages of syphilitics in various groups from various sources, all based on the complement-fixation test: Prostitutes, 50-100%; insane, 25-35%; adults, admitted to hospitals and dispensaries for medical and surgical conditions, 6-25%; tubercular patients, 20-30%; pediatric cases, 2-10%, and up to 40% in subnormal and idiotic cases; criminals, 20-40%; men appearing for enlistment in the army, 20%; presumably healthy women, 3-20%, depending on social status.

The section on the sources of infection and mode of transmission is complete, if conventional, but the chapter on prophylaxis is rich in valuable material, much enhanced by the author's military experience. The final chapter deals, thoroughly and sympathetically with the alteration of ideals involving the reform of our social system so far as the problem of prostitution is concerned. Education and sociological reform are discussed at length, as are the control of venereal diseases through the various means of suppression of prostitution, treatment of those infected, regulation of quacks and quack remedies, public education, and public health measures such as regulation of barber shops, soda fountains, etc.

This work may be considered as one of prominent examples of the excellent efforts that medicine is making to render good health a permanent, essential part of the social fabric; to awaken everyone to the part that hygiene and preventive medicine play in the civilized cosmos; to dignify and glorify the role that medical science has assumed in the last decades especially. G. H. T.

Emergencies of a General Practice. By Nathan C. Morse. St. Louis: Mosby. 1918.

This book contains in compendious form information on the ordinary emergencies of practice,—removal of foreign bodies, treatment of drowning, poisoning, coma, acute abdominal conditions, various injuries and obstetrical emergencies, etc. It is short, practical and well put together, but so antiquated that it would scarcely have been useful twenty years ago. The practitioner of to-day can get better information from the small handbooks issued under the direction of the Surgeon-General's office. L. E.

Correspondence

DOCTORS WANTED FOR RED CROSS.

Bureau of Medical Service.

"Washington, D. C., July 20, 1918.

"G. H. Richardson, Medical Advisor,
942 Market St., San Francisco.

"Cable requests physicians as follows: 23 General Practitioners, 20 Tuberculosis, 80 Pediatrics, Pediatricians need not be specialists exclusively but good general practitioners who have done special work with children. PUSH NECESSARY STEPS FOR APPLICANTS THROUGH YOUR DIVISION." (Caps ours).

(Signed) SHIPLEY,

Copy of telegram received by the Bureau of Personnel, Pacific Division. Those interested can apply at once Room 503, 942 Market St., San Francisco, for further information. Even if this is filled immediately it is planned to develop a waiting list in order to meet promptly similar requests.

County Societies

ALAMEDA COUNTY.

Alameda and Berkeley are numbered with five of the American cities where the baby death rate is below fifty per thousand births reported.

Two interesting papers were read at the June meeting of the Alameda County Medical Association:

I. Proposed Simplified Technic in Thoracotomy for Empyema to Induce Prompt Lung Expansion. By Dr. Robert T. Stratton.

II. Submucous Resection of the Nasal Septum. Illustrated by lantern slides. By Dr. Francis M. Shook.

Dr. A. M. Smith has resigned as superintendent of the Alameda County Infirmary.

Dr. R. T. Legge and Dr. Charles L. McVey have just returned from an eastern trip. Among the cities visited were Rochester, Minn., Toronto, New York, Washington and Chicago. At the latter city they attended the meeting of the American Medical Association. Dr. Kirby Smith was also an attendant at the meeting.

Drs. E. C. Curdts and Edward Von Adelung have received commissions of captains. Dr. Von Adelung is now stationed at Camp Lewis. Drs. Henning Koford and A. F. Maine have been commissioned first lieutenants. Dr. Koford has been ordered to Camp Lewis.

In accordance with the request of the Federal Government until the end of the war the classroom work of the Oakland College of Medicine has been discontinued. Medical students will enter the larger institutions. The closing of the smaller college is releasing scores of scientific men engaged as instructors to Government service. The conclusion of the educational work in the Oakland College of Medicine does not mean, however, that the several clinics which the physicians of the city have built up and to which they are contributing the upkeep and services will be closed. A new importance has been attached to this phase of medical work. The clinics for children, men and women will be continued without interruption through the summer.

LOS ANGELES COUNTY.

Meeting of June 6

The Los Angeles County Medical Association met as usual June 6, at 8:15 p. m. in the Hamburger building. The president, Dr. William Duffield in the chair, opened the meeting.

Dr. Black announced the death from meningitis of Dr. Edward Everett Tredway at Camp Kearny.

Dr. Duffield spoke of the last meeting at Mount Lowe, and that Dr. Hagedorn is arranging for us to have some real fun, and a day of relaxation early in July.

The Committee on Referendum consisting of Drs. Myer, Killpatric and Crum is not ready to publish its report.

Dr. Edwards appealed for 25,000 nurses by July 5. The quota for Los Angeles is 210. No one can reach them better than the physician who is in close contact with them. They are entitled to insurance and are well paid. Those between the ages of 25 and 35 are preferred. Report at Red Cross Headquarters at Tenth and Main streets. The physical requirements are almost those of soldiers. Healed tubercular cases are not barred. A committee should be appointed to take this matter in hand. Those in essential occupations are not to go. Doctors who have nurses as stenographers should release them for service. Some nurses are used as luxuries. This should not be permitted. Public opinion should be able to release them. Nurses are as important as doctors. Between July and August there are also 15,000 nurses' aids needed. They do not have to be trained.

Dr. Hastings said that all should get together. One scheme is to have a representative committee of five for every hospital in order to learn how many nurses are available. He mentioned the Good Samaritan Hospital staff having ten paid nurses, including the superintendent. Seven have gone to war and three are in France, Miss McFarland and Miss McCall. The chiefs on the three floors have gone. The night superintendent has been cured of tuberculosis. The nurses in charge of general surgery have not yet graduated. In twenty years, 214 had graduated. Of the alumna association, 57 have married, 9 died, 21 are unfit, 4 are in Canada, 6 are supporting families and 9 are still in the hospital, which makes a total of 106. Fifty are registered in the hospital, 28 have gone to war, and some have been lost track of. Fifty graduate nurses are on call for private work. Forty per cent. have gone to the war. The training school is not doing well. Seventy to eighty are in training. There are only 46 probationers instead of 76. Four hundred and thirty-seven outside nurses are registered for work and available for calls. Fifty-nine are Good Samaritan graduates. A good way would be to get such information from every institution. Some are registered in several hospitals. We can get accurate information by co-operating with the heads of the hospitals.

Dr. Duffield—Let us not leave it entirely to committees, for everyone knows some nurses who could go.

A motion was made and carried to have a committee appointed.

Committee: Drs. Hastings, Molony, Johnson, Lobingier, Kurtz, Huggins, Ross, Lacy, Hagedorn, McCoy, Mattison of Pasadena, Tom Rogers of Long Beach, Captain Cohen and Tyroler. Dr. Thomas for the Bay Hospital of Santa Monica, etc.

As Dr. Duffield had to go to the American Medical Association Convention the following day, the Vice-President, Dr. Wm. H. Kiger, took the chair.

Dr. Arthur Stanley Granger lectured on "The Value of the Ambard Coefficient in Estimating the Blood Urea Nitrogen."

Dr. Cecil E. Reynolds presented a child, aged 4½ years, who had been operated upon six months previously for an epilepsy of three years standing.

Physician Gets Captaincy.

News that Dr. Fred C. Shurtleff, formerly of Los Angeles, has been promoted to a captaincy, was received by his friends at Central Police Station, June 8. He will be assigned to Alcatraz Disciplinary Station, Alcatraz, Cal., in the Government service.

Major W. V. Brem was ordered to base hospital at Camp Kearny June 10.

Santa Monica Surgeons Accepted.

Dr. Arthur C. Smiley, Dr. Oscar Anderson of Venice, Dr. A. B. Hromadka and Dr. George A. Fielding of Sawtelle, and Dr. John Balsley of Santa Monica were accepted in the U. S. Medical service June 12.

To War Zone.

Dr. Mayo Reiss, Medical Corps, Three Hundred and Sixty-first Infantry, with rank of first lieutenant, is going to France.

Physical Culture Teacher.

Dr. Herbert True of the School Health Department was detailed by the Board of Education June 8 to take charge of corrective work for the physically unfit in the secondary schools of Los

Angeles in order to develop a better standard of manhood among the students.

Captain Barnhart leaves on the first of July to report for duty in the U. S. Medical Corps.

Dr. H. N. Brothers received notice June 26 that he had been appointed a captain in the Medical Reserve Corps.

Los Angeles Woman Doctor Married.

Dr. F. Marian Games went to Sacramento June 27 to wed Dr. Carl Sutton who is in the Hospital detachment of the Aviation Construction Corps at Vancouver, Wash.

Red Cross Head Arrives in France.

Gurney E. Newlin, chairman of the Los Angeles Chapter of the Red Cross was called to service in France where he arrived June 28.

Medical Delegates of Southern California.

Scientific and military sessions of the Sixty-ninth Annual Convention of the American Medical Association held in Chicago were attended by Dr. George H. Kress representing Los Angeles, Dr. Henry P. Newman, San Diego, and Lieut. Henry Sherk of Pasadena, Dr. Granville MacGowan and Dr. William Duffield of Los Angeles and Dr. Cornelius Van Zwalenburg of Riverside.

Dr. Maude Wilde, chairman of the Mothers' Educational Bureau, in charge of the local campaign for the observance of Better Babies week, was in Colton June 3. The celebration lasted until June 10. Local stores have promised to hold special child welfare exhibits where mothers may seek advice concerning the feeding and care of infants.

Dr. Wilde's committee includes Dr. Margaret V. Clark, vice-chairman; Mrs. A. Rae Condit, secretary; Miss Josephine Breed, treasurer; Mrs. Harold E. Thomas, auditor. Directors are Mrs. Herbert A. Cable, Mrs. C. S. Thompson, Mrs. W. A. Galentine, Mrs. W. Booth, Dr. Anna Chapin, Charles C. Davis, E. J. Lickley, Dr. Titian Coffey, Dr. H. F. True and Dr. Francis Kellogg.

Tubercular Hospital.

Bids for the first unit of the Tri-County Tubercular Hospital to be constructed at Sylmar, were opened by the Board of Supervisors June 17 and referred to the Mechanical Department. The figures submitted ranged from $44,859 to $77,870.

Segregation Hospital is Needed.

The California Welfare Commission at a meeting in Los Angeles June 1 adopted a resolution urging the Governor and the Trustees of the Pacific Moron Colony to take steps to erect immediately temporary buildings for treating segregated cases. Warren Olney, Jr., of Berkeley, presided and emphasized the enforcement of the laws against morality, medical treatment of those men and women who are diseased, and reconstructive work for those who are mentally capable of benefiting from such treatment, so that they may finally go back into the world fit to take care of themselves.

Psychopathic Authority to Direct Morons.

The Psychopathic Association of California announces that Dr. George L. Wallace, expert of Massachusetts, will act as chief adviser and superintendent ex-officio for the Moron Colony. Mrs. J. Powers Flint is chairman of the board of trustees of the colony and her committee members are Newton Thompson of Alhambra and May Roberts Coolidge of Berkeley. Three grades of patients will be segregated, the high grade moron (those who do not show their condition except under expert surveillance), the epileptics and the defective delinquents. The first group is considered the most dangerous to society. The Legislature of 1917 appropriated $250,000 for the colony and by the bill specified the purchase of not less than 800 acres of land with buildings, equipment, furniture, supplies, with water and farm lands and that it should be near some city or town. Mrs. W. S. James of Los Angeles founded the work of the Psychopathic Association of Los Angeles.

American Women's Hospitals Drive.

The campaign for $50,000 began with a banquet at the Alexandria, June 21. The drive will be conducted under the auspices of the Los Angeles City Council of Defense, Woman's Branch, cooperating with the War Service Committee of the Medical Women's National Association.

Michael J. Shannon of San Francisco, who will have charge of the local campaign, was toastmaster. Dr. Martha Welpton of San Diego, secretary of the Medical Women's National Association, outlined the work of the American Women's Hospitals in Europe, while Dr. Etta Gray of Los Angeles, president-elect of the association, stated that the organization in Europe represents the war service activities of 2000 women physicians who are united in national effort. She said that for every woman physician who goes to France from two to three men physicians will be released for active service at the front.

Dr. Gray, who is also president-elect of the Medical Women's National Association, announced that teachers in the Los Angeles schools had contributed $15,000 to the organization for the purpose of an ambulance for one of the units to be sent to France.

"There is at present one unit of the organization in France," said Dr. Gray. "It consists of four doctors, six nurses, one dentist, two ambulances and drivers, assistants and clerks. The units are sent to the cities of France, where they care for the civilian population. France at present has but few physicians and surgeons who are not in the army. In one French city the woman physician we sent was the only physician among a population of 25,000 persons."

A number of Los Angeles women physicians and nurses have signified their intention to join units and leave for France in the near future. One who is daily awaiting call is Dr. Margaret Gilliland.

To Intern Girl Vagrants.

The eighteen women now lodged in the County Jail on technical charges of vagrancy probably will be interned in an annex to the County Hospital, according to a recommendation by N. R. Martin, superintendent of the hospital, to the Board of Supervisors. Estimates for fitting up such an annex now are being prepared.

MENDOCINO COUNTY.

A joint meeting, with the N. W. P. Association of Railroad Surgeons was held on Saturday evening, June 22, at the Palace Hotel, Ukiah.

The meeting started with a banquet and the County Society was the guest.

Before the banquet the County Society held a short business meeting at which the resolution memorializing Congress for an adequate new Army Medical Museum was adopted. The county medical survey was gone over and the Secretary instructed to have the results printed and sent to the doctors and Council of National Defense.

Promptly at 8 o'clock Dr. A. Miles Taylor, President of the N. W. P. A. of Railroad Surgeons, called those at the banquet to order. Obedience to this mandate was rendered by Drs. A. Miles Taylor and C. O. Southard of San Francisco, Robert L. Richards and Arabelle J. Feldkamp of Talmage, S. S. Boyle and P. A. Meneray of Santa Rosa, M. A. Craig of Lakeport, George W. Stout, S. L. Rea and L. K. Van Allen of Ukiah, F. O. Butler of Eldridge, W. F. Jones of San Rafael, W. C. Shipley

of Cloverdale, F. G. Gunn of Willits and O. H. Beckman of Fort Bragg.

While fortifying the inner person with fuel, various toasts were given. Everybody enjoyed himself and the guests will long remember the occasion.

The main paper of the evening was by Dr. F. O. Butler. Subject: Tonsils, etc. All present took part in a lively discussion on the subject, which varied between the tonsils and the appendix, taking account of digestive disturbances and other symptoms. Dr. Taylor mentioned, among other interesting things on those regions, the occurrence of "double appendix" and related three cases of it in his own practice. Two he himself had removed by a second operation, Appendix No. 2 not having been noticed at the first operation. The third case had been operated upon for appendicitis the second time by another surgeon who removed this plural appendix.

Dr. A. Miles Taylor very cordially invited the Mendocino County Medical Society to their August meeting, which will be held at San Francisco.

On Sunday forenoon, June 23, at Talmage, interesting clinics were held by Dr. Robert L. Richards.

News of those serving Uncle Sam: Assistant Surgeant R. H. Hunt, N. R. F., is having very active service "over there" on the U. S. S. Corsair. Captain R. A. Babcock, intensive training, San Francisco; Captain H. H. Wolfe, Camp Crane, Allentown, Pa.; Dr. Frank C. Piersol, Mendocino, has been comissioned a lieutenant, M. R. C. Dr. Robert L. Richards, Medical Superintendent of Mendocino State Hospital, Talmage, is doing special work for the War Department and visits all the camps on this coast with reference to Neuropsychiatric Boards, in addition to such other things as he is asked to do.

SACRAMENTO COUNTY.

Sacramento Society for Medical Improvement.

The regular monthly meeting of the Sacramento Society for Medical Improvement was held Tuesday evening, June 18, at the Hotel Sacramento.

The meeting was called to order by the President, Dr. G. A. Briggs.

Report of Cases.

Dr. Gundrum reported a case of nephritis in pregnancy. Upon delivery the placenta was found to be abnormally large, measuring twelve inches in diameter, two inches thick, and weighing four and one-half pounds, the umbilical vein being as large as an ordinary umbilical cord.

Dr. Fay reported a case of bacillary dysentery in an adult, terminating in death after eight months' duration.

Dr. C. C. Crane of San Francisco delivered the paper of the evening on "Some Conditions Mistaken for Rheumatism." The subject was splendidly illustrated by a series of X-Ray plates.

Dr. W. A. Briggs presented a resolution and plan to give financial aid to those members of the Society who have entered military service. On account of the lateness of the hour the resolution was laid on the table to be taken up at the next regular monthly meeting.

It was moved, seconded and carried that the Society continue its regular meeting during July and August, having twelve regular meetings a year.

The following doctors have received commissions and are awaiting call: Dr. G. A. Briggs, first lieutenant; Dr. E. W. Twitchell, captain; Dr. A. F. Higgins, captain.

A special meeting of the Sacramento Society for Medical Improvement was held at the Hotel Sacramento Thursday evening, May 30. The object of this meeting was to present to the Society the plan for the enrollment of doctors in the Medical Reserve Corps, as proposed by the local committee of the Council of National Defense. The plan in brief is to divide all the doctors of the county into two groups. First, those over 55 years of age; second, those under 55. Those under 55 years of age to volunteer their services to the Army or Navy, when required, in the following order:

First. Doctors unmarried.
Second. Doctors married without children.
Third. Doctors married with children.

Members of each group to apply in order of age, youngest first. The question of dependency, or any other matter to be taken before a committee composed of:

First. A doctor over 55 years of age.
Second. A representative of a local financial institution.
Third. A member from one of the selective service boards.

All doctors who are unable to secure a commission will automatically become members eligible for the Volunteer Medical Service Corps. This plan was unanimously adopted by the Society.

SAN DIEGO COUNTY.

The San Diego County Medical Society decided to suspend its regular meetings throughout the months of July and August. Its last meeting in June, on the 26th, took the form of a dinner dance at the Point Loma Golf Club, at which the ladies were the honored guests and furnished the program of patriotic entertainment. Many medical officers from adjacent camps were present on this occasion, and a delightful evening was enjoyed by all.

Dr. J. E. Hileman and wife returned from their honeymoon and are receiving the congratulations of their many friends.

It is with regret that we chronicle the death of Dr. Albert J. Elliott, for many years one of San Diego's foremost physicians.

Dr. J. H. Mallery has accepted a first lieutenant's commission in the medical reserve corps of the army. He will be connected with the Tuberculosis Section, Department of Internal Medicine, at Whipple Barracks, near Prescott, Ariz.

Dr. Thomas O. Burger has accepted a Captain's commission in the medical reserve corps of the army and has been assigned to duty at the Letterman General Hospital, Presidio, San Francisco.

The new tuberculosis hospital built and equipped by the County Commissioners will open its doors in August. This building is ideally constructed for its purpose, and is ideally situated on a bluff overlooking the valley of the San Diego river. Fresh air currents and an abundance of sunshine should be available almost every day of the year.

The following doctors have been secured as interns for the County Hospital to serve for the fiscal year beginning July 1st: Dr. George W. Mills, from Rush Medical College, Chicago; Dr. Carl G. Lundquist, from Rush Medical College, Chicago; Dr. Thomas O'Toole, from Rush Medical College, Chicago; Dr. James Thom, Medical Department, Indiana State Univ.; Dr. Isador M. Rossyn, from Loyola Medical College, Chicago: Dr. Elmer H. Hansen, from Tulane Medical College, New Orleans, La.

Dr. A. J. Holeton and Dr. H. A. Keener, recent house physicians, have accepted positions in the medical reserve corps of the army and navy respectively. The latter has just passed the examination for Assistant Surgeon in the regular Navy Medical Corps, and is stationed at Mare Island.

SAN FRANCISCO COUNTY.

News has been received of the safe arrival in France of the University of California Base Hospital unit.

Stanford University unit is reported to be at present in Scotland.

The medical section of the National Council of Defense has issued a call for 10,000 more medical men to enlist in the Reserve Corps. Local subcommittees have been appointed and are at present engaged in a canvass of the situation so as to determine the eligibility of men for such service, and when found, urging them to apply. This, in spirit, practically amounts to a voluntary medical draft. So far in San Francisco the efforts of the committee have met with encouraging results.

Dr. Leonard Ely, who was with the Stanford unit and who was reported ill in Europe, has been sent home and is at present undergoing treatment in an eastern hospital.

SAN JOAQUIN COUNTY.

The regular meeting of the San Joaquin County Medical Society was held Friday evening, June 28, at the Mokelumne Club, Lodi, the guests of the Lodi physicians. Those present were: Drs. R. R. Hammond, B. J. Powell, B. F. Walker, J. T. Davison, W. F. Priestly, J. B. Craviotto, Margaret Smythe, C. F. English, F. J. Conzelman, L. Dozier, W. J. Backus, C. R. Harry of Stockton and Drs. J. Priestly, A. M. Tower, S. W. Hopkins, J. E. Nelson, S. R. Arthur, E. B. Todd, H. J. Bollinger of Lodi, with Surgeons Hogan and Riordan of the United States Navy as guests.

The resignation as secretary of Dr. Dewey R. Powell, who has entered the service, was read and accepted, and Dr. R. T. McGurk was elected for the remainder of the year.

A very interesting and instructive talk was given by the surgeons of the Navy on the advantages to be gained in the Naval Service.

R. T. McGURK, Secretary.

SONOMA COUNTY.

The regular meeting of Sonoma County Medical Society was held at the county hospital July 11. The county physician, Dr. F. O. Pryor, conducted a clinic, showing several interesting cases.

The Volunteer Medical Service Movement was discussed and met with hearty approval.

Address of President Wilson, July 4, 1918, Mount Vernon

Gentlemen of the Diplomatic Corps and My Fellow Citizens:

I am happy to draw apart with you to this quiet place of old counsel in order to speak a little of the meaning of this day of our Nation's independence. The place seems very still and remote. It is as serene and untouched by the hurry of the world as it was in those great days long ago when General Washington was here and held leisurely conference with the men who were to be associated with him in the creation of a nation. From these gentle slopes they looked out upon the world and saw it whole, saw it with the light of the future upon it, saw it with modern eyes that turned away from a past which men of liberated spirits could no longer endure. It is for that reason that we can not feel, even here, in the immediate presence of this sacred tomb, that this is a place of death. It was a place of achievement. A great promise that was meant for all mankind was here given plan and reality. The associations by which we are here surrounded are the inspiring associations of that noble death which is only a glorious consummation. From this green hillside we also ought to be able to see with comprehending eyes the world that lies about us and should conceive anew the purposes that must set men free.

It is significant, significant of their own character and purpose and of the influences they were setting afoot, that Washington and his associates, like the barons at Runnymede, spoke and acted, not for a class, but for a people. It has been left for us to see to it that it shall be understood that they spoke and acted, not for a single people only, but for all mankind. They were thinking, not of themselves and of the material interests which centered in the little groups of landholders and merchants and men of affairs with whom they were accustomed to act, in Virginia and the colonies to the north and south of her, but of a people which wished to be done with classes and special interests and the authority of men whom they had not themselves chosen to rule over them. They entertained no private purpose, desired no peculiar privilege. They were consciously planning that men of every class should be free and America a place to which men out of every nation might resort who wished to share with them the rights and privileges of free men. And we take our cue from them, do we not? We intend what they intended. We here in America believe our participation in this present war to be only the fruitage of what they planted. Our case differs from theirs only in this, that it is our inestimable privilege to concert with men out of every nation what shall make not only the liberties of America secure but the liberties of every other people as well. We are happy in the thought that we are permitted to do what they would have done had they been in our place. There must now be settled once for all what was settled for America in the great age upon whose inspiration we draw to-day. This is surely a fitting place from which calmly to look out upon our task, that we may fortify our spirits for its accomplishment. And this is the appropriate place from which to avow, alike to the friends who look on and to the friends with whom we have the happiness to be associated in action, the faith and purpose with which we act.

This, then, is our conception of the great struggle in which we are engaged. The plot is written plain upon every scene and every act of the supreme tragedy. On the one hand, stand the peoples of the world—not only the peoples actually engaged, but many others also who suffer under mastery but can not act; peoples of many races and in every part of the world—the people of stricken Russia still, among the rest, though they are for the moment unorganized and helpless. Opposed to them, masters of many armies, stand an isolated, friendless group of governments who speak no common purpose, but only selfish ambitions of their own by which none can profit but themselves, and whose peoples are fuel in their hands; governments which fear their people and yet are for the time their sovereign lords, making every choice for them and disposing of their lives and fortunes as they will, as well as of the lives and fortunes of every people who fall under their power—governments clothed with the strange trappings and the primitive authority of an age that is altogether alien and hostile to our own. The Past and the Present are in deadly grapple and the peoples of the world are being done to death between them.

There can be but one issue. The settlement must be final. There can be no compromise. No halfway decision would be tolerable. No halfway decision is conceivable. These are the ends for which the associated peoples of the

world are fighting and which must be conceded them before there can be peace:

I. The destruction of every arbitrary power anywhere that can separately, secretly, and of its single choice disturb the peace of the world; or, if it cannot be presently destroyed, at the least its reduction to virtual impotence.

II. The settlement of every question, whether of territory, of sovereignty, of economic arrangement, or of political relationship, upon the basis of the free acceptance of that settlement by the people immediately concerned, and not upon the basis of the material interest or advantage of any other nation or people which may desire a different settlement for the sake of its own exterior influence or mastery.

III. The consent of all nations to be governed in their conduct toward each other by the same principles of honor and of respect for the common law of civilized society that govern the individual citizens of all modern States in their relations with one another; to the end that all promises and covenants may be sacredly observed, no private plots or conspiracies hatched, no selfish injuries wrought with impunity, and a mutual trust established upon the handsome foundation of a mutual respect for right.

IV. The establishment of an organization of peace which shall make it certain that the combined power of free nations will check every invasion of right and serve to make peace and justice the more secure by affording a definite tribunal of opinion to which all must submit and by which every international readjustment that can not be amicably agreed upon by the peoples directly concerned shall be sanctioned.

These great objects can be put into a single sentence. What we seek is the reign of law, based upon the consent of the governed and sustained by the organized opinion of mankind.

These great ends cannot be achieved by debating and seeking to reconcile and accommodate what statesmen may wish, with their projects for balances of power and of national opportunity. They can be realized only by the determination of what the thinking peoples of the world desire, with their longing hope for justice and for social freedom and opportunity.

I can fancy that the air of this place carries the accents of such principles with a peculiar kindness. Here were started forces which the great nation against which they were primarily directed at first regarded as a revolt against its rightful authority but which it has long since seen to have been a step in the liberation of its own people as well as of the people of the United States; and I stand here now to speak—speak proudly and with confident hope—of the spread of this revolt, this liberation, to the great stage of the world itself! The blinded rulers of Prussia have roused forces they knew little of—forces which, once roused, can never be crushed to earth again; for they have at their heart an inspiration and a purpose which are deathless and of the very stuff of triumph!

Military News

FROM THE COUNCIL OF NATIONAL DEFENSE.

"To the Young Women of America:

"Across the sea, from France, with every closing day of the heroic struggle of our fighting men, there comes a more imperative call to the women of America to assume their full share of responsibility in winning this world war for the right of men, women, and nations to live their own lives and determine their own fortunes.

"There exists now an extreme need for at least 25,000 women of character, intelligence, and education to fill the gaps in our hospital staffs caused by the calling of many thousands of skilled nurses to the fighting front.

"There is only one way to fill these gaps: by helping our hospital training schools supplied with students, who are not only preparing for service abroad and at home at the end of their course and at the same time are equipping themselves to earn their living in one of the noblest of professions, but from the very outset of their course are serving their country as well as learning.

"The Surgeon General of the United States Army, the Surgeon General of the United States Public Health Service, the American Red Cross, the General Medical Board and the Women's Committee of the Council of National Defense therefore unite in an earnest appeal for 25,000 young women between the ages of 19 and 35 to enroll in what shall be called the United States Student Nurse Reserve. The enrollment will begin on July 29, 1918. Those who register in this volunteer body will engage to hold themselves in readiness until April 1, 1919, to be assigned to training schools in civilian hospitals or to the Army Nursing School and begin their course of study and active student nursing.

"The service which we are asking calls for the best that the womanhood of America can offer in courage, devotion, and resourcefulness. We can not go forward to victory overseas if the wives and families of our fighters are not sustained in health and strength, if we can not protect our workers against the hazards of war industries, if we can not defeat accident and disease—our enemies at home. Upon the health of the American people will depend the spirit of their forces in the field.

"Acting on the urgency of the need, the undersigned have asked the State divisions of the Women's Committee of the Council of National Defense, through their local units, to enroll the 25,000 women needed. We ask the women of America to support us in our further effort not to lower American hospital standards, and to give us the practical assurance of their support by going to the nearest recruiting station established by the Women's Committee of the Council of National Defense on or after July 29 and enrolling in the United States Students Nurse Reserve.

ANNA HOWARD SHAW,
Chairman, Women's Committee,
Council of National Defense.
W. C. GORGAS,
Surgeon General,
United States Army.
RUPERT BLUE,
Surgeon General,
United States Public Health Service.
H. P. DAVIDSON,
Chairman, War Council,
American Red Cross.
DR. FRANKLIN MARTIN,
Chairman, General Medical Board,
Council of National Defense.

ARMY HEALTH.

Secretary Baker has given out the following information:

Health of men in cantonments: The deaths per thousand, from all causes, in the Regular Army of the United States has been as follows:

1898	20.14
1900	7.78
1901	6.90
1916	5.13

The death rate per thousand among all troops—Regulars, National Army, and National Guard—in

the United States for the week ending May 31 was 4.89, and for the week ending June 7, 4.14. The death rate for disease only among all troops in the United States for week ending June 7 was 3.16, which is still lower than that of the preceding week (3.2), which was then the record low rate since that of November 2, 1917.

The bed capacity on June 5 in all department hospitals in the United States was 72,667. New construction now under way will provide for a total of 87,344 beds. The number of base and general hospitals in this country has increased from 7 to 72, and will be further increased. Vast hospital facilities have been organized and are being organized in France, providing beds numbering from 5 per cent. to 10 per cent. of the number of men in the American Expeditionary Forces.

Psychological examinations, of which more than 500,000 have been made, result in the weeding out of about one-fourth of 1 per cent. of the men examined.

Nutritional surveys in 270 messes in 50 camps have resulted in a readjustment of rations and a conservation of food.

The number of officers in the Medical Corps has increased from 900 to 24,000; the number of enlisted men from 8,000 to 148,000. These figures, of course, are exclusive of the Sanitary Corps and of the Army nurses.

WOMEN IN MEDICAL CORPS.

Two women psychologists have been appointed to the Army Medical Department at Washington, Dr. Mabel Fernald and Dr. Margaret Cobb. According to Maj. R. M. Yerkes, of the Psychological Division, trained women can be used for the highly specialized work of handling the Army reports and may eventually be called upon to assist with work in special hospitals dealing with cases of reconstruction.

MAIL FOR A. E. F.

After July 1 the delivery of mail to members of the Expeditionary Forces will be conducted under the jurisdiction of the War Department. Thus far mail for the Expeditionary Forces has been delivered by the Post Office Department to the "rail head" in France; that is, to the end of the railroad nearest the headquarters of the division or regiment for which the mail is intended. After July 1 the Army assumes jurisdiction over the delivery of this mail from the time it leaves this country. It is hoped that this transfer of jurisdiction may tend to hasten the delivery of letters to men in the Expeditionary Forces, especially to men who have recently arrived in the war zone and whose location is known only to the military authorities and for military reasons can not be disclosed to civilian employees of the Post Office Department.

To deliver a letter to a man in the American Expeditionary Forces takes on the average a little less than 30 days from the time the letter is put in the mail box in America until it is delivered to the mail orderly of the United States Army at the railhead in France. Some letters have made this trip in 17 days; in other cases it has taken 42 days, and 60 per cent. of this mail makes this trip in from 20 to 25 days. This is somewhat remarkable when it is remembered that the sailing of fast vessels, such as are intrusted with this mail, is very irregular, and also because of the fact that the men and supplies which are pouring into France have tied up all rail transportation from the ports of arrival to the rail heads. Between 1,000,000 and 2,850,000 letters are carried upon each vessel.

The delivery of these letters after they leave the railway is, of course, subject to the uncertainties of war conditions. The importance of giving the "last unit"—for instance, the company—as well as the regiment to which a man belongs, can not be overemphasized. If the letter bears merely the number of the man's regiment, or if the man is in the air service, the Quartermaster Corps, or some other organization which is not divided into companies, it is necessary to send the letter to the statistical division to ascertain where the soldier is stationed.

X-RAY AT FRONT TRENCHES.

The Committee on Public Information, Division on Woman's War Work, issues the following:

The X-ray is now carried to the front-line trench for the benefit of wounded soldiers, so that no time may be lost in ascertaining the condition of wounds. The Army Medical Department has developed a mobile X-ray outfit, carried on a standard Army ambulance slightly modified.

This outfit includes an X-ray table, a dark room, also a complete set of apparatus for the localization of foreign bodies. Fully as expert work can be done with this mobile outfit as in any base hospital X-ray department. Its use in the field makes it possible for the surgeon at the front to send a complete report of a soldier's condition when a man is transferred to a hospital back of the lines.

PUBLIC HEALTH ACTIVITIES UNDER ONE CONTROL.

Executive Order.

Whereas, In order to avoid confusion in policies, duplication of effort, and to bring about more effective results, unity of control in the administration of the public health activities of the Federal Government is obviously essential, and has been so recognized by acts of Congress creating in the Treasury Department a Public Health Service, and specially authorizing such service "to study the diseases of man and the conditions influencing the propagation and spread thereof" and "to cooperate with and aid State and municipal boards of health";

Now, therefore, I, Woodrow Wilson, President of the United States, by virtue of the authority vested in me as Chief Executive, and by the act "authorizing the President to co-ordinate or consolidate executive bureaus, agencies, and offices, and for other purposes, in the interest of economy and the more efficient concentration of the Government," approved May 20, 1918, do hereby order that all sanitary or public health activities carried on by any executive bureau, agency, or office, especially created for or concerned in the prosecution of the existing war, shall be exercised under the supervision and control of the Secretary of the Treasury.

This order shall not be construed as affecting the jurisdiction exercised under authority of existing law by the Surgeon General of the Navy, and the Provost Marshal General in the performance of health functions which are military in character as distinguished from civil public health duties, or as prohibiting investigations by the Bureau of Labor Statistics of vocational diseases, shop sanitation, and hygiene.

WOODROW WILSON.

The White House, July 1, 1918.

CARE IN REPORTING DISEASES THAT MIGHT MENACE HEALTH OF TROOPS URGED UPON DOCTORS.

The Public Health Service, Treasury Department, has sent the following letter to local health officers:

It is important for the protection of the health of the troops in camps that every community, no matter how small, report the presence of all communicable diseases, especially if present in epidemic proportions. Selected and enlisted men in traveling may be exposed to such diseases and carry them into camp.

It is obvious that disease reporting depends primarily upon the doctors, but local health authorities should realize that the grave responsibility rests upon them of obtaining reports of all notifiable diseases from the doctors in their jurisdictions. In addition to rendering more complete reports under present regulations for reporting disease, it is highly desirable that physicians report immediately those cases where a selected or enlisted man has been so exposed to a communicable disease as to be a menace to any camp or post in the United States.

Plan of Action Suggested.

For this purpose the following plan of action is suggested by the United States Public Health Service after a conference with Army sanitary authorities:

1. The physician should make an immediate report to the local health authorities, who should notify (by telephone or telegraph if necessary) the senior medical officer of the camp or post to which the selected man or soldier may become a menace. A duplicate notification should be made by the local authorities to the State health authorities.

2. If there be no local health authority having jurisdiction, the physician should notify (by telephone or telegraph if necessary) the State health officer, who should notify (by telephone or telegraph if necessary) the senior medical officer of the camp or post to which the selected man or soldier is about to go.

3. The notification should be explicit, giving name of selected man or soldier and other identification data, together with his address and the nature of the disease.

4. The notification of the senior medical officer of the camp or post by the local or State health authorities should be in addition to the present procedure in such cases.

As a result of the studies at the front, methods have been developed whereby more than 80 per cent. of the wounded, who originally remained at the military hospitals for months, are now cured and returned to the forces in three or four weeks. In order that Army surgeons stationed at camps, cantonments, and other military hospitals in this country may thoroughly understand the latest treatment of war wounds, the Army Medical Department has had established special classes of instruction to which are sent selected officers who, upon completion of their courses, return to their own hospitals and instruct other surgeons in these methods.

The earliest possible information of changes of treatment are sent to the Surgeon General's Office from the American Expeditionary Forces, and these in turn are immediately transmitted through the classes and, by means of moving pictures, lantern slides, and pamphlets, to every surgeon who will come in contact with these wounds either at home or at the front.

Since last October more than 150 officers have received special instruction each month in classes which have been established at the War Demonstration Hospital, Rockefeller Institute; four classes at Bellevue Hospital, New York; Roosevelt Hospital, New York; University of Pennsylvania, at Philadelphia; Rochester, Minn.; Pittsburgh, Chicago, New Orleans, and San Francisco.

All surgeons who will come into contact with war wounds have received instruction in the methods of administering the Carrel-Dakin treatment, and sufficient apparatus has been furnished to treat every patient in the service who may require this method. A large supply of apparatus has been sent to Europe so that there are now more than 50 sets available for every injured man who, up to the present time, has needed this treatment, and over 3,000 sets are being shipped every month to care for the added number of wounded in which this application may be necessary.

GUARDING CAMPS FROM FLIES AND MOSQUITOES.

To guard troops stationed in camps and cantonments from disease carried by mosquitoes and flies, the medical department of the Army has installed a system of prevention which is safeguarding not only the soldiers but also civilians living in the neighborhood of training camps.

There is attached to each camp a division surgeon who is responsible for the health of the camp. Assisting him is a sanitary inspector who has the assistance of a sanitary engineer and from 100 to 200 enlisted men who are continually employed in work designed to protect the health of the soldiers.

Special attention is now being given in all camps to cleaning up spots where mosquitoes and flies breed. In some cases it has been necessary to dig channels in streams, drain swamps, and put in elaborate ditching systems in order to clean up stagnant pools and streams. In those cases where it has been found impossible or impracticable to drain swamps and to do other work of a similar nature, there has been installed a system for keeping these slow-moving streams and still bodies of water covered with oil. At all points within the camp where there is the slightest possibility of mosquitoes or flies breeding, daily spraying of oil is done.

Arrangements have been completed with the Federal Public Health Service to carry out a similar program in the territories adjacent to the camps. The Health Service has agreed to fill bogs, open streams, and drain swamps and continue the oil spraying for a distance of one mile around all camps.

Special precautions have been taken to prevent the spread of disease by flies. With the approach of the fly season a general order was sent to all division surgeons and other health officers to take all necessary steps to prevent the breeding of flies. Instructions were given on the disposal of materials that were likely to become breeding spots. Arrangements were made to protect all food from flies. With this end in view all buildings in which food is prepared or stored were screened. The entrance to the buildings have been vestibuled. An added guard is the placing of flytraps in all buildings. An average of 6,000 such traps have been placed in each camp. More than 22,700,000 square feet of screening has been placed in all camps.

State Board of Health

Summary of Minutes of Meeting of July 6, 1918.

The State Board of Health met in Sacramento on July 6, 1918. The members present were:

Dr. George E. Ebright, president; Dr. F. F. Gundrum, vice-president; Dr. Edward F. Glaser, Dr. Adelaide Brown and Dr. W. H. Kellogg, secretary.

Miss Anna C. Jammé, Director of the Bureau of Registration of Nurses, was granted a leave of absence during the period of the war in order that she might accept service under the War Department as Inspector of Military Training Schools for Nursing. Miss Jammé's action in entering upon this important Government work was a very patriotic one, as her salary will be greatly reduced by the change. The Director of the Bureau of Registration of Nurses presented a list of 214 successful candidates in the examination for registration, which was approved by the Board and to whom certificates will be issued. Miss Laura Grant was appointed assistant to the Director of the Bureau of Registration of Nurses. The standard national curriculum for training schools for nurses, prepared by the National League of Nursing Education, was approved by the Board for use in the training schools of California. Dr. Evans, President of Occidental College of Southern California, was present at the meeting, and upon his presentation of evidence to the effect that Occidental College conformed to the requirements, it was voted to recognize the inauguration in that college of a combined course leading to a degree of B. S., and graduating in nursing in a period of five years. This course will consist of two years of training in the Pasadena Hospital following a three-year regular collegiate course embracing certain required scientific work.

The report of the Director of the Bureau of Tuberculosis on the San Bernardino County Hospital was accepted as entitling that institution to the state subsidy for forty beds.

On the recommendation of the Director of the Bureau of Sanitary Engineering, temporary permits for the operation of swimming pools were granted to several applicants. Permit was also granted to the City of Calexico to continue to supply water to the inhabitants from the Imperial Valley canals, after filtration and treatment according to specifications by the bureau. Temporary permit was granted to the City of Colton to use existing water works, also to the Coronado Water Company to supply water to the City of Coronado, and to the Corona Water Company to supply water to the City of Corona. A large delegation of citizens and officials of Fresno and Kings Counties appeared before the board to argue for and against the issuance of a permit for the disposal of waste from the canneries of the California Peach Growers' Association at Reedley and Kingsburg; also to the City of Kingsburg for the disposal of industrial waste into the Kings River. After due consideration both applications were granted upon certain restrictions formulated by the Bureau of Sanitary Engineering.

There was present the usual number of persons cited to appear before the board for violation of the Food and Drug law, a full hearing being given in each case before decisions regarding future action was taken.

W. H. KELLOGG, Secretary.

IN ERRATA.

The name of Dr. L. J. E. Gouguet of Chico, Calif., should be added to the California Honor Roll, as the doctor has been "over there" for some time.

Department of Pharmacy and Chemistry

Edited by DR. FELIX LENGFELD.

Help the propaganda for reform by prescribing official preparations. The committees of the U. S. P. and N. F. are chosen from the very best therapeutists, pharmacologists, pharmacognosists and pharmacists. The formulae are carefully worked out and the products tested in scientifically equipped laboratories under the very best conditions. Is it not plausible to assume that these preparations are, at least, as good as those evolved with far inferior facilities by the mercenary nostrum maker who claims all the law will allow?

Owing to the delay in getting out blanks, the Internal Revenue Department has extended time for the new registration under the Harrison Anti-Narcotic Act to August 1st. Any physician who has not registered by that time should fill out blank at once, swear to it before a notary and send it with $1.50 to the Collector of Internal Revenue, Battery and Washington streets, or he may take the blank to the Collector's office and swear to it before a deputy collector. The additional 50c is in the nature of a penalty. This is very important and should be attended to at once as failure to do so may mean, if not fine and imprisonment, at least considerable trouble and expense.

D. I. Macht (Soc. & Exp. Bi. & Med., February 20, 1918; J. Pharm. & Exp. Med., April, 1918) studied the relation between the chemical structure and medical properties of the opium alkaloids and found that the alkaloids divide structurally into two groups—one related to morphine and the other to papavarine. These two groups differ markedly in their physiological effect on smooth muscle. The morphine group causes contraction and increases tonicity, the papavarine group inhibits contraction and decreases tonicity. Papavarine, therefore, is indicated in cases of excessive peristalsis and colic of smooth muscle and has been used clinically with excellent success in such cases. Unfortunately, papavarine which, even in normal times, is not too plentiful, is now difficult to obtain. Macht studied the structure of the different papavarine alkaloids to find a group or groups common to them which might give the general effect. He found benzyl common to all and, therefore, studied the properties of some benzyl derivatives. Benzyl alcohol and benzyl esters were selected. The internal administration of benzyl benzoate and acetate was found best and benzyl benzoate more particularly studied. Benzyl benzoate is not a narcotic nor is it toxic in the ordinary sense, but it has a markedly soothing action on the smooth muscles and seems to give all the effects of papavarine. At low temperatures it is a solid but melts below 20 degrees C, so that it is ordinarily an oily liquid insoluble in water, soluble in alcohol, ether, chloroform and oils. The dose is from 2 to 4 minums and it is given in 20% alcohol solution (20-30 drops at a dose) or in capsules mixed with oil. Inter-muscular injections have also been used. Benzyl alcohol is not adapted, apparently, to internal use but a 1% solution in water is found to act as a local anesthetic without being toxic in the ordinary sense. Benzyl alcohol, in addition to being soluble in the usual organic solvents is soluble to the extent of 4% in water. It boils at 206 degrees C and, therefore, its solution in water may be boiled for a moderate time without any appreciable loss and without any change in the benzyl alcohol.

Macht promises later papers giving full accounts of the clinical use of these remedies and there seems no doubt that we have in benzyl benzoate and benzyl alcohol two very important additions

to the materia medica. It is not improbable that many other simple compounds have been overlooked in the chase after synthetics and that quite a number of these will be added to the list in the near future.

State Board of Medical Examiners

At the regular meeting of the Board of Medical Examiners, held in Native Sons Hall, San Francisco, Cal., June 24 to 27, 1918, inclusive, 176 applicants of various classes wrote the examination for the specific certificate sought. Of this number eight were for a physicians and surgeons certificate in Japanese, two wrote the examination in Japanese for certificate to practice midwifery, two applicants wrote the examination in Spanish for physicians and surgeons certificate. In accordance with the policy adopted by the Board, the papers written in foreign languages are delivered into the custody of the consul of the respective country, who kindly assumes responsibility for translation, the cost being prorated among the applicants who by law are required to pay all cost incident to the conduct of the examination in a foreign language. After translation the papers are forwarded to the respective examiners for grading.

At the request of the faculty, the Board established by resolution the rating of each student in the Oakland Medical College as preliminary to the matriculation of such students in other medical teaching institutions, should a student determine such a move essential in view of the derating of the school by the Council of Education of the American Medical Association.

Membership in the Federation of Medical Examining Boards of the United States was continued.

Application for restoration of license to Calvin Case and S. R. Chamlee, revoked at former meetings of the Board, was denied.

Report of the Legal Department of the North of activities since the February 1918 meeting showed:

REPORT OF LEGAL DEPARTMENT (NORTHERN DISTRICT), BOARD OF MEDICAL EXAMINERS.

Cases Reported Pending February 14, 1918.

Name, Disposition, Remarks.

Quan, San; dismissed; insufficient evidence.
Alexander, H. K.; guilty; 100 days or $100.
Rosenholtz, M. E.; guilty; 100 days or $100.
Rosenholtz, M. E.; dismissed; convicted on other charge.
Hegyessy, James; guilty; pending for sentence.
Hegyessy, James; dismissed; convicted on other charge.
Jesse, Madam; pending; held to answer.

Reported pending for trial Feb. 14, 1918	7	
Guilty		3
Dismissed		3
Pending		1
	7	7

Arrests Made Subsequent to February 14, 1918.

Name, Disposition, Remarks.

Fong, Wan; acquitted.
Matilsky, J.; guilty; probation 6 months.
Dunne, Fay Woo; guilty; 100 days or $200.
Sau, Yet Cho; pending; held to answer.
Fong, Wan; pending.
Foo, Wan; pending; fugitive.

Arrests made since February 14, 1918	6	
Guilty		2
Acquitted		1
Pending		3
	6	6

Recapitulation.

Cases pending	7	
Arrests made	6	
Dismissed		3
Acquitted		1
Guilty		5
Pending		4
	13	13

REPORT OF LEGAL DEPARTMENT FOR SOUTHERN CALIFORNIA FOR THE PERIOD FEBRUARY 14, 1918, TO JUNE 20, 1918, INCLUSIVE.

Cases for Violation State Medical Practice Act Pending February 14, 1918.

Name of Case, Disposition.

Campbell, Verner A.; dismissed.
Foy, R. C., Santa Barbara; mistrial, dismissed.
Jones, E. E., Santa Barbara; convicted, $250 or 125 days—defendant committed to jail.
Hook, Charlie; convicted, $200 or 100 days—appeal pending.
Ching, H.; plead guilty, $200 or 100 days—fine paid.
Leung, T.; convicted, $500 or 180 days—appeal pending.
Webb, E. T.; pending, defendant not apprehended.
Chan, G. S.; dismissed.
Jackson, M. J.; dismissed.
Yee, Tom Lin; plead guilty, $100 or 100 days—fine paid.
Foote, A. M.; convicted, $300 or 100 days—appeal pending.
Donovan, Donald; dismissed.
Lowe, W. S.; pending, defendant left jurisdiction.
Fong, Ruckiss W.; plead guilty, $100 or 100 days—the records show this case to have been suspended.
Wing, Tom How; dismissed.
Batdorf, J. W.; convicted, $200 or 90 days—appeal pending.
Tuey, K. Y.; plead guilty, $100 or 100 days—fine paid.
Lewis, B. A.; convicted, $300 or 150 days—served 4 days in County Jail, paid $294 balance of fine.
Gardenez, Pompeo; guilty, 60 days—suspended 2 years.

Cases Instituted between February 14, 1918, and June 20, 1918, inclusive.

Name of Case, Disposition.

Torbert, Madame; plead guilty, $100 or 100 days—sentence suspended 2 years.
Stratton, Lydia; plead guilty, $200 or 100 days—sentence suspended 2 years.
Howell, S. J.; pending.
Wing, Tom How; mistrial, pending.
Donovan, Donald; plead guilty, $200 or 100 days—fine paid.
Chan, G. S.; plead guilty, $250 or 100 days; fine paid.
Nabeya, Denjiro; plead guilty, $100 or 100 days—fine paid.
Abe, Sosuke; plead guilty, $100 and 180 days—jail sentence suspended 2 years, fine paid.
Hirotoe, H.; convicted, $100 or 100 days—appeal pending.
Chung, H.; plead guilty, $250 and 180 days—fine paid, jail sentence suspended 2 years.
Bruder, E. A.; bail forfeited $250, pending—defendant not apprehended.
Gilkerson, J. K.; pending, off calendar.
Dominguez, Armando (Chino); pending, defendant not apprehended.
Soto, Panfilo; plead guilty, 90 days, suspended 2 years.
Vockell, H. G.; plead guilty, $100 or 100 days—fine paid.
Diamond, J. C. (Long Beach); pending, held to answer.

Summary.

Convictions after trial	7
Pleas of guilty	14
Dismissed	6
Pending	8
Acquittals	0
Totals	35

Fines.

Fines imposed and paid into court 1/1/18 to date	$2,044.00
Fines imposed, cases pending on appeal January 1, 1918, to date	1,300.00
Total fines imposed	$3,344.00

APPEALS PENDING.

Supreme Court, State of California.

Name of Case, Disposition.

Suckow, John K. vs. Board; pending.

District Court of Appeals.

Name of Case, Disposition.

Lanterman, R. C. vs. Board; decision of Superior Court dismissing writ affirmed by District Court of appeal; petition for re-hearing in Supreme Court denied.

Superior Court—Writs.

Name of Case, Disposition.

Jacobson, Moses; writ of review; pending.

Wolf, W. M.; writ of mandamus; petition for writ of mandamus denied, June 19, 1918.

Charges of Unprofessional Conduct Initiated Since January 1, 1918.

Name of Case, Offense Charged, Disposition.

George Ball Rowell; subdivision 5, Section 14; guilty, probation 1 year.

Alvin Shattuck; Subdivision 5, Section 14; dismissed, respondent deceased.

Thos. F. Glass; Subdivision 3, Section 14; guilty, revoked.

Moses Jacobson; Subdivision 10, Section 14; guilty, revoked.

APPEALS PENDING.

Superior Court, State of California, County of Los Angeles.

Name of Case, Disposition.

Foote, A. M.; pending.

Batdorf, J. W.; pending.

Leung, T.; pending.

Hook, Charlie; pending.

Hiroto, H.; pending.

Investigation of the issuance of diplomas by the Pacific Medical College has resulted in the dissolution of that corporation. Judgment dissolving that corporation was made and entered on the 7th day of June, 1918.

Legal Hearings.

The following holders of certificates entitling them to practice some system of the healing art in California were cited to appear before the Board and judgment was entered as follows:

James Hegyessy, D. O., complaint filed charging violation under fifth subdivision, Section 14, Medical Practice Act; guilty. Certificate revoked.

Fisher R. Jordan, M. D., complaint filed charging violation under first subdivision, Section 14. Certificate revoked. Restraining order issued and writ of review pending.

Mary Kroetz, M. D., complaint filed charging violation first subdivision, Section 14. Certificate revoked. Restraining order issued and writ of review pending.

George W. O'Donnell, M. D., charged with violation eighth subdivision, Section 14; found guilty. Certificate revoked.

William L. Owen, M. D., charged under fifth subdivision, Section 14, having been convicted of violations of Postal regulation in connection with the conduct of a men's specialist office in New York, and thereafter sentenced to two years in the Federal prison at Atlanta, Georgia, found guilty as charged and certificate revoked.

Marion Thrasher, M. D., charged under first subdivision, Section 14, found guilty. Certificate revoked.

Fred W. Reil, Naturopath, charged under tenth subdivision, Section 14, guilty. Judgment suspended for two years.

Frank T. Duncan, M. D., charged under first subdivision, Section 14, guilty. Judgment suspended until October, 1918, meeting.

Albert P. Woodward, M. D., charged under first subdivision, Section 14, adjudged guilty. Probation until annual 1920 meeting.

Robert D. Shoultz, Naturopath, charged under eleventh subdivision, Section 14, adjudged guilty. Judgment suspended thirteen months.

R. J. C. O'Connell, M. D., charged under fifth subdivision, Section 14. Complaint dismissed.

Ephriam W. Northcott, M. D., charged under first subdivision, Section 14; guilty. Judgment suspended until annual meeting of 1920.

Citations charging G. W. O'Donnell, James Hegyessy, Mary Kroetz, other than mentioned above, were set aside and the charges dismissed.

The following licentiates have filed the legal document substantiating a legal change from the name appearing on the original certificate issued:

Name as changed.	Original Name.
Conrad	Agnes Eigholz
Ruddock	Agnes Scholl
Cheney	Florence V. Wall
Mell	Ellen F. McCarthy
Rittenaus	Pearl Schroder
Kratz	Ester Cumberland
Moore	Gertrude K. Arnold
Feather	Harriett Rice
Perea	Lauré Ducote
Ford	Maude Abrams

Oakland College of Medicine and Surgery.

By resolution the Board validated the credentials of the students of the Oakland College of Medicine and Surgery enrolled for the 1917-1918 session, giving each student a "class standing" before this Board in accord with the records of the College, thereby permitting students to finish their college course in such medical college approved by the Board as they might elect to enter, and thereafter being assured of Board's recognition.

EXAMINATIONS FOR MEDICAL LICENSE JUNE, 1918, SAN FRANCISCO.

Homeopathic Materia Medica.

ROBERT A. CAMPBELL, M. D.

(Answer Ten Questions Only.)

1. (a) Write a prescription using three drugs and a vehicle.
   (b) Describe the case for which you would prescribe it.
2. Give the indications for three remedies in a case of pelvic pain.
3. Discuss cantharis.
4. Discuss the treatment of cholera infantum.
5. Describe the care and treatment of a case of scarlet fever.
6. Give symptomatology calling for colocynth and dioscorea
7. Discuss the therapeutics in pneumonia
8. Give the indications for four remedies useful in typhoid fever.
9. What is apomorphine? Give dose, indications and action.
10. Name five drugs in which large doses are liable to produce a cutaneous rash.
11. Name three cardiac stimulants, three diuretics, give the dose of each.
12. Differentiate, aconite, belladonna, gelsemium and bryonia in fevers.

Bacteriology and Pathology—Physicians and Surgeons.

DR. D. L. TASKER.

1. Discuss the relationship between arterio-

sclerosis and chronic interstitial nephritis.
2. Discuss hypostatic congestion of the lungs. Under what circumstances is it most likely to occur?
3. Explain why disorders of the urinary bladder are so common and so resistant to treatment in (a) elderly women (b) in elderly men.
4. Describe the changes which take place during an attack of septic endocarditis and what valves are most likely to be involved and permanently impaired?
5. Describe the effects and changes which result (a) from an excess of secretion of the thyroid gland; (b) from a deficiency of the thyroid secretion.
6. What is the etiology of cholelithiasis and what pathologic changes may result in the gall-bladder and contiguous viscera?
7. What is the role of the colon bacillus in human pathology?
8. State the nature and the value of antistreptococcic serum.
9. Describe the Widal reaction.
10. Describe the use of polyvalent vaccines.
11. Describe the technique of Grams staining method.
12. Name five bacteria which may cause acute pneumonia.

Pathology and Elementary Bacteriology. 2000 Hr. Drugless.

DR. DAIN L. TASKER, D. O.

1. Discuss the relationship between arteriosclerosis and chronic interstitial nephritis.
2. Discuss hypostatic congestion of the lungs. Under what circumstances is it most likely to occur?
3. Explain why disorders of the urinary bladder are so common and so resistant to treatment in (a) elderly women; (b) in elderly men.
4. Describe the changes which take place during an attack of septic endocarditis and what valves are most likely to be involved and permanently impaired.
5. Describe the effects and changes which result (a) from an excess of secretion of the thyroid gland; (b) from a deficiency of the thyroid secretion.
6. What is the etiology of cholelithiasis and what pathologic changes may result in the gall bladder and contiguous viscera?
7. Name three culture media. Describe the making of agar media.
8. Discuss the morphology of bacteria.
9. Name ten pathogenic bacteria.
10. Differentiate the characteristics of bacteria and protozoa.
11. Define the following terms: Pyogenic, Toxicogenic, Parasite, Saprophyte, Endogenous, Exogenous.
12. Name five diseases caused by protozoa.

Pathology and Bacteriology—Chiropodists.

DAIN L. TASKER, D. O.

1. What characteristic pathology is present in a case of weakness in the transverse arch?
2. What ligament is involved in flat-foot?
3. Give the pathology of hallux valgus.
4. What constitutional conditions may cause wounds in the skin of the feet to be difficult to heal?
5. Describe the development of callosities.
6. Give the pathology of paronychia.
7. What are the local signs of bacterial infection?
8. Discuss pus.
9. Why do ulcers form on the feet in some cases of locomotor ataxia?
10. What types of infection find entrance through puncture wounds in the skin?
11. What are the signs which would lead you to believe tuberculosis of the bony structure of the foot existed?
12. Describe bursitis and note where bursae may be located in the foot.

Obstetrics and Gynecology—Physicians and Surgeons, 2000 Hours Drugless.

(Answer Ten Questions.)

R. A. CAMPBELL, M. D.

1. Discuss birth paralysis.
2. Name eight causes of obstructed labor.
3. What are the external measurements of the normal pelvis? Use metric system.
4. (a) Name the external genital organs.
   (b) Name the internal genital organs.
   (c) Name the ligaments of the uterus.
   (d) Give origin and distribution of blood supply to the uterus.
5. Describe the operation for complete laceration of the perineum.
6. Describe the mechanism of labor in the L. O. A. position.
7. At what locations does pus in the pelvis point? Why is this the case?
8. Outline differential diagnosis between right-sided salpingitis, ectopic gestation and appendicitis.
9. Give symptoms and treatment of streptococcic endometritis.
10. A primipara three months pregnant has an ovarian cyst the size of an orange. What is the proper procedure?
11. Discuss the delivery of twins.
12. Describe the operation for Caesarean Section.

Obstetrics For Midwives.

(Answer Ten Questions.)

ROBERT A. CAMPBELL, M. D.

1. What should a midwife carry in her obstetrical bag?
2. What is the normal duration of pregnancy? How is this calculated?
3. Name the conditions or diseases which might be mistaken for pregnancy.
4. When would you use a douche after labor?
5. Describe the care of the infant during the first twenty-four hours immediately following birth.
6. What are signs and symptoms of pregnancy?
7. How can you tell a breech presentation before birth? Describe the delivery in such a presentation.
8. When and how should antiseptics be used in obstetrics?
9. What may hemorrhage during gestation imply?
10. What would you do for a woman suffering with hemorrhage following child birth until a physician may be called?
11. When would you consider the use of forceps necessary?
12. A woman in the second stage of labor has convulsion. What would be your procedure in such a case?

Chemistry and Toxicology—Physicians and Surgeons.

H. E. ALDERSON, M. D.

(Answer Ten Questions Only.)

1. Discuss the chemical changes that occur when a strong aqueous solution of Ag No_3 is applied to a mucus patch.
2. Discuss the properties of sulphur praecipitate.
3. Discuss chronic silver nitrate poisoning.
4. In what strength should aqueous solution of mercury biniodide contain potassium iodide? Why?
5. Discuss the probable toxic agent responsible for the following symptoms: Nausea, frontal headache, coryza, salivation, bad taste, and a pustular eruption.
6. Discuss the probable toxic agent responsible for the following symptoms: Coryza, red-

denced conjunctiva, puffy eyelids, pigmentation, hyperkeratosis, cramps and diarrhea.
7. Which is a more dangerous poison, strychnine or carbolic acid? Why?
8. Discuss "lye" poisoning and the antidotes.
9. What is the result of heating a mixture of HNO_2 and $KCLO_3$?
10. In what cases of poisoning should emetics not be given? Why?
11. Discuss atropine poisoning.
12. Describe sodium and discuss three of its salts.

Elementary Chemistry and Toxicology—Drugless Practitioners.

H. E. ALDERSON, M. D.

(Answer Ten Questions Only.)

1. Describe briefly the element stibium.
2. Discuss briefly the haloid group.
3. Discuss "temporary hardness" and "permanent hardness" of water.
4. Define "efflorescence" and "deliquescence."
5. Describe briefly and discuss the "Bunsen burner."
6. What is CO_2 CO_3?
7. Discuss chronic silver nitrate poisoning.
8. Which is a more dangerous poison, strychnine or carbolic acid? Why?
9. Discuss "lye" poisoning and the antidotes.
10. In what cases of poisoning should emetics not be given? Why?
11. Discuss atropine poisoning.
12. Discuss the probable toxic agent responsible for the following symptoms: Nausea, frontal headache, coryza, salivation, bad taste, and a pustular eruption.

Surgery—Physicians and Surgeons.

WM. R. MOLONY, M. D.

(Answer Ten Questions Only.)

1. Briefly discuss traumatic shock and in particular its diagnosis.
2. A woman sixty years of age as the result of an automobile accident, sustains a fracture of the left femur in the middle, compound fracture of the left humerus in the middle and a fracture of both bones of the left forearm. In addition to the above, she is in profound shock. Give management of case during the first week.
3. In the above case, at the end of the first week, the skin of the entire left forearm shows dry gangrene. Give management of entire case from end of first week to final conclusion.
4. Give technique of any approved operation for the cure of prolapsus uteri (incomplete) in a woman past the menopause.
5. What pathological conditions of the blood may modify or interfere with normal tissue repair?
6. Give the technique of an operation for decompression in the sub-temporal region.
7. Give management of abscess (unbroken) of vulvo-vaginal gland.
8. What symptoms, signs and laboratory findings determine the necessity for immediate operation for appendicitis.
9. Stricture of the oesophagus in any part; Etiology symptoms and differential diagnosis.
10. A patient presents himself with a hard indurated non-ulcerative tumor, the size of a pea, on the margin of the tongue. Give management of the case.
11. Give three accepted routes for drainage of Maxillary Sinus (Autrum of Highmore). Give technique of one operation.
12. Discuss treatment of uterine fibroid other than surgical.

Surgery—Chiropodists.

WM. R. MOLONY, M. D.

(Answer Ten Questions Only.)

1. Define hammer toe. Give treatment.
2. What constitutional conditions may delay tissue repair?
3. What constitutional conditions in children may favor the development of flat foot?
4. Define perforating ulcer of a foot. Give etiology.
5. Discuss causes of edema of both feet.
6. Discuss causes of edema of one foot.
7. A person has a persistent discharge through a sinus opening upon the skin of the foot. Discuss etiology.
8. Give management of an ingrown nail (inflammatory of the big toe).
9. When should the treatment of talipes in an infant begin?
10. Give treatment of bursitis.
11. Discuss vaso-motor disturbances of the toes.
12. Discuss anesthesia of the skin of one or both feet.

Hygiene and Sanitation—Physicians and Surgeons and 2000-Hour Drugless.

HARRY V. BROWN, M. D.

(Answer Ten Questions Only.)

1. What is the Pignet test of physical efficiency?
2. Give an example of an efficient larvacide and describe how used.
3. What are carriers? What are missed cases? Explain their significance in epidemiology.
4. Discuss the comparative frequency of infection by direct contact; by formites; by air.
5. Give in detail the most practical method of generating formaldehyde gas for terminal disinfection.
6. Explain methods of disinfecting bedding and clothing.
7. Mention two or more diseases carried by each of the following animals or insects: Dog, cat, cow, horse, hog, mosquito, lice, flea, rat and goat.
8. Amebic dysentery—give mode of transmission, incubation, carriers, prophylaxis.
9. Describe and make drawing of a suitable crematory for the disposal of garbage.
10. Describe a method of manure disposal by incineration and one other method.
11. Describe a latrine, tell how to care for same, and locate with reference to camp.
12. What floor space per man is essential in barracks?

Hygiene and Sanitation—Midwives.

HARRY A. BROWN, M. D.

(Answer Ten Questions Only.)

1. What are the objects to be obtained by the sanitary control of milk in a community?
2. What are the harmful effects of illuminating gas?
3. What is the average quantity of water required by an adult in twenty-four hours. Name its more common impurities.
4. How much urine is excreted by adult in twenty-four hours, and how often should it be excreted?
5. How may flies produce disease?
6. Discuss the protection of food from contamination in the household.
7. Discuss the hygienic precautions in the care of an individual with an ordinary "cold."
8. What is the most hygienic method of cleaning floors?
9. Why should the house be protected from the entrance of mosquitos?
10. To what elements are due the evil effects of badly ventilated rooms?
11. How is the public health affected by stagnant water?
12. What diseases must be reported to Boards of Health and why?

Materia Medica, Therapeutics, Pharmacology and Prescription Writing—Physicians and Surgeons.

P. T. PHILLIPS, M. D.

(Answer Ten Questions Only.)
All Applicants Answer No. 7.

1. Describe an alkaloid. Name ten official alkaloids and their derivation.
2. Define antipyresis. Discuss briefly the principal therapeutic methods of its production, giving example of each method.
3. Describe pancreatin, giving its physiological action and therapeutical uses.
4. Discuss briefly phosphorus as a therapeutical agent.
5. Outline in detail, treatment of acne vulgaris.
6. Discuss briefly the uses of rectal feeding. Giving method in detail.
7. Write a prescription, without abbreviation, containing salicylic acid, tincture of aconite, infusion of digitalis, aromatic spirits of ammonia and a suitable vehicle. For what would it be useful as a whole and what action would you expect from each ingredient.
8. Discuss briefly strychnine as a therapeutical agent.
9. Patient sixty-five years old has blood pressure systolic 220, diastolic 135, chronic constipation, slight albuminuria with casts, dyspnea and vertigo. Outline treatment, giving doses and mode of administration of any drugs used. (What would the pulse pressure be in this case?)
10. What remedies are of value in a severe attack of angina pectoris? Give doses, mode of administration and action.
11. Define diuresis. Classify diuretics, giving action and example of each class.
12. Describe properties, action and uses of dionin.

Eclectic Materia Medica.

H. V. BROWN, M. D.

(Answer Ten Questions Only.)

1. (a) Write a prescription using three drugs and a vehicle.
   (b) Describe the case for which you would prescribe it.
2. Give indications for three remedies used for pain in the chest.
3. Discuss collinsonia.
4. Discuss the treatment of Entero-colitis.
5. Give indications for Eupharbia and Euphrasia in mucous membrane diseases.
6. Name three bitter tonics and give their uses.
7. Give physiological action of Ergot, Macrotys and Viburnum.
8. Name four enzymes and give therapeutic uses.
9. Give the treatment for chronic interstitial nephritis.
10. Discuss the therapeutic value of blood transfusion.
11. Classify cathartics and give examples.
12. How would you prescribe for a patient with left hemiplegia and having a positive Wassermann reaction.

Chiropody and Therapeutics—Chiropodists.

P. T. PHILLIPS, M. D.

(Answer Ten Questions Only.)

1. Name twenty (20) ailments and diseases to which the foot is subject.
2. Discuss the essentials of a proper shoe for a normal foot.
3. Give the medicinal treatment of a vascular corn.
4. Give the local and constitutional treatment of mild eczema of feet.
5. Give the differential diagnosis and treatment of rheumatic gout.
6. Write a prescription for a suitable bunion lotion.
7. Describe the treatment of an ordinary blister.
8. Write a prescription for the relief of a neuralgic pain.
9. Why is nitrate of silver preferable to strong acids in treating hard vascular growths?
10. Describe the conditions in which you would advise the addition of salt or borax to a foot bath.
11. Discuss the essentials of a proper stocking for a normal foot.
12. How would you treat a severe case of chilblains?

Physiology—Physicians and Surgeons, 2000-hour Drugless.

ERNEST SISSON, D. O.

(Answer Ten Questions Only.)

1. May voluntary muscle contractions be both simple and tetanic? Explain each.
2. Explain the conversion of sugar brought by the blood to the muscular tissue into glycogen and its subsequent history. Discuss the nutrition of muscle.
3. Make a diagram and explain the direction of degeneration in a cut motor nerve root compared with a cut sensory nerve root.
4. Give in brief the physiology of the cerebral cortex.
5. Describe the gray rami communicantes and give their function.
6. Illustrate how the eye accommodates to objects at different distances.
7. Discuss the variations in blood pressure in the pulmonary circuit as compared with the systemic circuit.
8. Discuss the physiological properties of cardiac muscle.
9. Discuss the cerebro-spinal fluid, its formation, function. How influenced.
10. Discuss the innervation of the respiratory movements.
11. Discuss the digestion and absorption in the intestines.
12. Discuss the physiology of the pituitary body.

Physiology, Chemistry and Hygiene—Chiropodists.

ERNEST SISSON, D. O.

(Answer Ten Questions Only.)

1. What is the normal pulse rate and temperature of an adult?
2. Discuss the lymphatic circulation and its importance.
3. What is the general arrangement of grey and white matter in the brain?
4. Give the general properties of the blood.
5. Of what importance is urine analysis?
6. Outline a hygienic procedure in the protection and care of the normal foot.
7. What is the significance of sugar in the urine, and what precaution would it suggest to you?
8. Name three safe disinfectants and tell how to use them.
9. Give some of the differences between inspired and expired air.
10. A person found unconscious in your waiting room, what different conditions might you suspect and some of the symptoms of each?
11. Describe the formation of blood clot.
12. What is the physiological importance of respiration?

General Medicine—Physicians and Surgeons.

A. M. SMITH, M. D.

(Answer Ten Questions Only.)

1. Discuss etiology, diagnosis and treatment of myocarditis.
2. What is Ludwig's angina? Briefly outline cause, diagnosis and treatment.

3. Differentiate uremic coma, alcoholic coma, cerebral hemorrhage with the treatment.
4. Discuss bronchiectasis, including etiology, diagnosis, prognosis and treatment.
5. Give differential points of renal calculus. Dietl's crises, pyelitis.
6. Outline venereal prophylaxis in a city.
7. Write your instructions for the management of lobar pneumonia in the case of a man 35 years old, pulse 120 and blood pressure 110 m. m.
8. Differentiate between Hodgkin's disease, tuberculous adenitis.
9. What is Parkinson's disease? Give etiology, symptoms, diagnosis and treatment.
10. Outline the treatment of acute alcoholism.
11. Discuss aortic stenosis.
12. What are the causes of neuritis? Briefly outline the treatment.

General Diagnosis—Drugless.

A. M. SMITH, M. D.

(Answer Ten Questions Only.)

1. What conditions are to be differentiated from Addison's disease?
2. Upon what would you make a diagnosis from congenital myxedema?
3. Briefly differentiate pain in the back due to acute nephritis; perinephritic abscess; uterine displacement; arthritis.
4. What are the blood findings in primary pernicious anemia: typhoid fever, malaria?
5. What diseases of the lung might simulate tuberculosis, and why?
6. Discuss the diagnostic features in duodenal ulcer.
7. Briefly discuss conditions to be differentiated from acute pleurisy.
8. Give the differential diagnosis between acute infectious arthritis and that due to gonococcus infection.
9. How would you diagnose aneurysm of the aortic arch?
10. What conditions might be mistaken for acute alcoholism?
11. Briefly outline differential diagnosis between varioloid and varicella.
12. What are the symptoms of lead poisoning?

Dermatology and Syphilis—Chiropodists.

A. M. SMITH, M. D.

(Answer Ten Questions Only.)

1. What is ground itch? How contracted?
2. Discuss the etiology and treatment of excessive sweating of the feet.
3. What is eczema pedium? Eczema plantarum?
4. Outline the treatment of tenia circinata of the feet.
5. Discuss the treatment of fissures between the toes.
6. In what systemic conditions do we have chronic ulcers of the feet?
7. What is the treatment of abrasions due to improperly fitted shoes?
8. Give differential points of diagnosis between poison oak and chilblains.
9. What is the treatment of poison oak?
10. What is the treatment of syphilitic ulcer of the feet?
11. How would you diagnose onychia of staphlococcic origin?
12. How would you differentiate a syphilitic wart from an ordinary corn?

Anatomy and Histology—Physicians and Surgeons and Drugless.

HARRY E. ALDERSON, M. D.

(Answer Ten Questions Only.)

1. Describe briefly the fetal circulation.
2. Describe the thoracic aorta.
3. Describe the cephalic vein and its main branches.
4. Describe briefly the trigeminal nerve and give its main branches.
5. Describe the gross and histologic structure of the thyroid gland.
6. Give the origin, insertion, nerve and blood supply of the pectoralis major muscle.
7. Describe briefly the thymus gland.
8. Discuss the histology of the buccal mucosa on the mid portion of the inner aspect of the lower lip.
9. Describe briefly the location and arrangement of the superficial lymph glands usually noticeably involved in lues.
10. Discuss briefly the chromaphil (or chromaffin) system.
11. Discuss the attachments, nerve supply and action of the sterno-cleido-mastoid muscle.
12. Describe the papillae of the tongue.

Anatomy and Histology—Chiropody.

HARRY E. ALDERSON, M. D.

(Answer Ten Questions Only.)

1. Describe briefly the metatarso-phalangeal articulations.
2. Describe the gross anatomy of the great toe.
3. Describe the histology of a toe nail.
4. Describe the blood supply of the skin of the toes.
5. Discuss the difference between the skin on the dorsum of the great toe and on the plantar aspect of the same.
6. Give the nerve supply to the skin of the foot
7. Describe briefly the gross structure of the liver.
8. Describe briefly the ankle joint.
9. What lymph structures are most often involved in foot infections?
10. Describe the distribution of fat in the foot.
11. Name in proper order from above downward, the main parts of the alimentary tract.
12. Define (a) bone, (b) cartilage, (c) bursa, (d) periosteum.

Anatomy and Physiology—Midwives.

ERNEST SISSON, D. O.

(Answer Ten Questions Only.)

1. Give the normal pulse, respiration and temperature of an adult.
2. What is the normal pulse, respiration and temperature of an infant 24 hours old?
3. Discuss the function of the skin.
4. Discuss the function of the uterus.
5. What is the normal reaction of the urine? What amount secreted in 24 hours?
6. Discuss normal menstruation.
7. Describe the bony anatomy of the pelvis.
8. Describe the normal uterus.
9. What muscles help to form the floor of the pelvis?
10. Name the principal structures contained within the pelvis.
11. Describe the heart.
12. Give location of ovaries with relation to the uterus.

NOTICE.

The Sixteenth Annual Meeting of the Pacific Association of Railway Surgeons will be held at the Medical Building, Bush and Hyde Streets, San Francisco, August 30th and 31st next.

New Members

Van Orden, Leander, San Francisco.
Lynn, Ethel A., San Francisco.
Jackson, J. A., Anaheim.
Myers, Mark C., Orange.
D'Ancona, A. A., San Francisco.
McLeish, A. H., Stockton.
Parrish, Frederick W., Dos Palos.
Johnson, B. W. ———
McCombs, Virgil, Los Angeles.
Murphy, Lea M., Los Angeles.

Obituary

FAYETTE WATT BIRTCH.

San Francisco.

It is a very rare thing that a man who was in medicine for only eleven years, and who spent all of that time in one hospital and in a relatively subordinate position, can be said to have made a distinct impression on the medicine of his time and place, or, even more, on the medicine of the country. And yet I think that Birtch can, with full justice, be credited with having done all of these things. Beginning with disappointment at the results of hospital work and moved by a mighty desire to make them better, he called a group of young professional men about him and began with them a study of methods in the St. Luke's Hospital Clinical Club. Out of this came the evolution of diagnosis by associated examiners, in which each and every organ or system of the patient is explored or interrogated by some one especially trained. The systematic completeness of this method is its point of difference from any other scheme in which consultation by some or many men is secured, and the composite which states negative findings as of equal value with positive, and makes the positive and negative in the final estimate present a picture of the patient's condition in its totality, has a far greater value than any method of examination in use up to the present time. Such a method could not have been thought of, still less worked out, by any man but one in search of the whole truth about his patients and wholly dissatisfied with partial statements, no matter how valuable true partial statements might seem to be, because in a complete exposition only could a true statement of a part be properly valued. It is a breadth of view about that common person, the patient, that very few of our profession have attained; it is a viewpoint to which no clinician will ever come alone; he must always have, as co-workers, those with vision trained to see that to which he is blind, or ears to hear sounds to which he is deaf, or associates to take over detail work; it is, unqualifiedly, the method of a Group, a distinct innovation in examination, as definite a step in advance in the study of patients as would be the discovery of a new panacea in therapeutics. It is a properly worked out method which should not be named for any society or hospital, but should be given, in simple justice, the name of its creator and be called the Birtch method.

The man who did this had an average origin and personality and education, but he was above the average in his mastering desire for knowledge of the whole truth. This was his predominant quality. With it was a great sympathy with those not making successes of their endeavors, and to their aid he voluntarily always went in the schools in which he taught, the colleges in which he studied, and the hospital in which he worked. In this last place he came, at critical times, to the help of not a few practitioners who brought patients there, and this delicate matter he always accomplished with entire regard for the established relations of physician and patient, rendering his service to both with an unobtrusive efficiency which made the service doubly grateful. In the Group he gathered in what is known as the Diagnostic Section of the St. Luke's Hospital Clinical Club, he was naturally the leader, and his stimulating effort had distinct personal effects on its members, so that while he built the method he also improved the material put into it.

In his brief opportunity he could write but few papers, and of these that describing the group method of diagnosis, published in the Journal of the American Medical Association in 1916, and the paper he read at the Coronado meeting of the Medical Society of the State of California on "Preoperative Investigation by Group Study" are easily the most important, the former describing the method and the latter showing its practical application and its inestimable efficiency in lessening post-operative mortality. Because of this paper, in the future a patient with a surgical possibility should have his value as an operative risk much more carefully estimated, and when statistics under the method have accumulated, an equation may be the final statement of the expectation of treatment, and this chiefly because a quiet man, living a much shut-in life, had two dominating characteristics—a passionate desire to know all of the truth about his patients, and a great sympathy which took him directly to the help of those who needed it.

HARRY M. SHERMAN.

Carpenter, Porter Harman, a graduate of State University, Iowa, 1910; died in Los Angeles May 25, 1918.

Owens, James S., a graduate of the Hahnemann Medical College, Chicago, Ill.; died June 16, 1918.

Howard, Walter I., a graduate of the University of Michigan, 1882; died in San Francisco July 7, 1918.

Dr. Allen E. Scott, San Francisco, died June 14th, 1918, of endocarditis. Was a graduate of the California Medical College, Calif., 1883.

Dr. Julius C. Voje, San Francisco, died in San Francisco June 18th, 1918, of cerebral hemorrhage. Age 59. Was a graduate of Cooper Medical College, 1894.

Allen, Woodsen, Berkeley, Calif. Died June 1, 1918. Was a graduate of Eclectic Medical Institute, Ohio, in 1884.

Watson, Wm. Seth, Sacramento, Calif. Died May 26, 1918. Graduate of the Bellevue Hospital Medical College, N. Y., 1870.

Elliott, Albert J, San Diego, Calif. Died May 23, 1918. Was a graduate of the University of Michigan, 1897. Age 45.

Clark, Wm. Sumner, Los Angeles, Calif. Died June 4, 1918. Was a graduate of the Central College Physicians & Surgeons, Indianapolis, 1881. Was a member of the Medical Society, State of California.

In Errata.—In the June issue, 1918, on page 322, the name Miller, Jas. T., should have read Jas. T. Martin, who died March 29, 1918, in Sacramento.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn.....Dr. W. H. Walker, Willows
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin.....Dr. W. F. Jones, San Rafael
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa.....Dr. Robt. Crees, Napa
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. A. V. Doran, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI SEPTEMBER, 1918 Number 9

"LET OUR **OBJECT** BE, OUR COUNTRY, OUR **WHOLE** COUNTRY, AND NOTHING BUT OUR **COUNTRY**."—WEBSTER.

A WAR MESSAGE FROM PRESIDENT VAN ZWALENBURG.

The manner in which the medical profession has responded to the call for war service is cause for pride and gratification. Whether soliciting or contributing to war funds, whether making draft examinations or rendering gratuitous services to dependents of soldiers, called to enlist for Red Cross, Army or the Navy, the medical profession has been found true to its traditional readiness to answer the call of distress, and has pushed forward with the energy of the man whose whole soul is dedicated to the cause.

California is not behind in this respect. The call of the Surgeon General, in April, for 5000 men has resulted in many additions to the Medical Reserve Corps from this State. The exact figures are not obtainable at present, but according to the most recent returns, California has practically 1000 doctors in service. In many centers hard working committees of the local medical societies have done effective work. This is the time for more of this work and more responses to the call.

The local committee is the effective unit to do this work. In England it has become necessary to organize all committees on this basis. The medical attendance upon the civil population must not be neglected, and only a local committee can satisfactorily adjust the supply of men.

I have assumed all along that all of our members—practically all reputable members of the profession,—are willing to respond to such positions as may *need* them—when it can be shown to them that *now* is the time, and this *their* "job." "Place me in *my* position," is, I find, the ruling frame of mind of our members. "But don't put a hardship upon me which should be borne by another." Who shall decide? Every man for himself—this is a voluntary draft. But who can advise? Who can adjust? Who can bring it home to the individual? The local committee.

The members of a local committee can weigh the various problems which affect each case, and impartially advise one to go and another to stay.

We need go no farther than our own local draft boards, to be convinced of the wisdom of our Government in delegating such momentous questions to these local boards. They patiently collect all evidence bearing on a given case, give everyone a hearing and decide upon the evidence.

In a recent letter,[1] the President of the American Medical Association, Dr. Arthur Dean Bevan, calls upon the officers of the State Societies to assist in the organization of the profession for this war. He asks that we furnish a sufficient supply of medical officers for the needs of the army, and that we do it in the way which will least disturb the civilian communities, hospitals and medical schools. He asks that the county medical societies be organized for the purpose of accomplishing the following results:

"1. To secure at least 20 per cent. of the registered practitioners of the State for the medical departments of the Army and Navy.

"2. In securing these men, a careful survey of each county, each medical school and each hospital should be made. No locality and no institu-

1. See correspondence, this issue.

tion unless it is clearly over supplied should be allowed to furnish more than 50 per cent. of its licensed practitioners; the association will endeavor to co-operate with the medical departments of the Government in securing the necessary protection to communities, hospitals and medical schools.

"3. Although it is desirable to secure at least 20 per cent. from each county, care should be taken to analyze the local conditions, the area of the county, the population of the county, the number of practitioners per capita in the county and as a general proposition, I suggest that at least one physician be retained at home for each 1200 or 1500 population."

We are passing on this appeal to every county Medical Society in the State.

Will you not step up with a prompt response —organize, conscientiously weigh each individual case and provide each unit its quota, for the good of the cause and the everlasting glory of the profession?

CARE OF THE CHILD.

Things every mother must know if the Nation is to meet the health needs of its children as indicated by the draft and still further revealed by the weighing and measuring test are made available by the Children's Bureau of the United States Department of Labor in its bulletin on "Child Care," prepared by Mrs. Max West.

A third of the men examined for military service in the first draft were found to have physical defects which rendered them unfit. Many of these defects might have been overcome if they had been recognized and dealt with in early childhood; the period between two and six is often the time when such defects make their first appearance. "Child Care" has been prepared in the hope that it would enable mothers to understand and recognize symptoms which indicate the need of special care, and also to give mothers the better understanding of the simple laws of hygiene through which it may be possible to prevent the development of such defects at all. It will be especially useful to thousands of mothers who have learned by the weighing and measuring test of defects and weaknesses in their children which need particular attention.

"Child Care" deals with children from two to six years old and is the third issue in the series which began with "Prenatal Care" and "Infant Care." It contains simple rules of health and hygiene, including carefully compiled directions about proper food, suitable clothing, suggestions for play and exercise, for discipline and training. It gives simple menus for young children, and a list of books on child care and training is added. It would be to the advantage of every doctor, especially those in general practice in small towns and rural districts, to have a supply of these bulletins for distribution.

THE CHILDREN'S YEAR IN CALIFORNIA.

Acting for the Children's Bureau, the Women's Committee of the California Council of Defense undertook to organize and conduct a program provided from Washington. The program called for the weighing and measuring of children. It was nation-wide in its scope and it was undertaken with the idea that a valuable mass of statistics would be gathered, and that these figures would enable comparisons to be made between the weights and the heights and the weight-height ratios of children in different parts of the country, as well as between those living in urban and rural communities. The original program did not specially emphasize the part the medical man should play in this survey, and in many parts of the country the profession was not invited to co-operate, with the result that many of the figures gathered must be open to doubt.

It is fortunate that the California Women's Council, led by Dr. Adelaide Brown, had the wisdom to see what need there was that the medical profession should co-operate. Without hesitation they sought and promptly received the endorsement of the California State Medical Society and the aid of its members in this work. That the endorsement was not perfunctory is attested by the fact that of nearly 41,000 children weighed and measured in June, 1918, more than 32,000 were also given physical examination and rating by medical men. This is an average of eight children examined for each registered man in the State of California. Those of the profession who co-operated appreciate to the utmost the immense amount of aid, clerical and physical, provided by the women who joined in the work, and every medical examiner marvels at the splendid power of initiative and organization shown by the women who built up the machine that worked so smoothly and so well.

To have interested the mothers of more than 40,000 children to the degree that they would bring their little ones for appraisement, was an achievement in preventive medicine and public education that will bear fruit long after the present generation has passed. But this is only the beginning, the 40,000 and odd children examined in all probability constitute about one-tenth of California's quota between 2 and 6 years. October this year and March next, are to be given over to similar drives and it is the duty of every one practicing medicine to use influence until no child of his acquaintance remains unexamined. The fact that 47 per cent.—that is, almost every second child examined—showed remediable defects can but emphasize our duty to the little ones who missed

their chance in June. Diseased tonsils or abnormal adenoid growths were found in about one-third of those looked over; the need for dental attention was imperative in 6 per cent. of these children, none of whom was more than six years old. And here in California, where sunshine and abundance are our pride, 29 per cent. of the children were greatly below the average weight for their measured height.

Surely these figures must bring concern to all of us who are truly interested in the prevention of disease, for they bring tremendous emphasis to bear upon what has slowly been forcing itself into the social consciousness for a decade—the fact that measures of preventive hygiene must begin at the cradle and be continued throughout childhood and adolescence and on into the daily grind of the grown-up. Perhaps too such statistics may bring a twinge to some consciences and a realization to some minds that alleviating pains of a long procession of sick children does not exhaust a physician's duty to childhood and to society. Although the response of the profession to the request for its time and energy was prompt and generous, some who ponder these figures may regret that they were not volunteers co-operating with the women's committee in this work. It may be borne into their minds that anxiety for the sick child has led the profession, in some degree, to neglect the apparently well, and there was and will still be opportunities to study the make-up of the healthy child and to discover the early evidences of remediable faults by aiding in the June, October and March drives of the Children's Year.

The revelation of the common faults of posture, or the demonstration of how the ill-adapted modern shoe develops flat foot, would either of them pay any physician and more than profit his patients. Those who volunteer for this work will come in contact with mothers who seek teaching and advice, who are anxious to have the faults of regimen they provide for their children pointed out, and who are eager to hear explanations and to accept instruction in the proper methods of feeding and caring for some own particular child. Such contact can only be stimulating and invaluable to any physician, whether he be burdened with years of knowledge or the youngest interne of the latest vintage. Whichever he be, he is sure to bring back from this work to his practice a new point of view, and an eager eye that will focus in critical wisdom upon the children of his acquaintance; a round shoulder, a pot-belly, an open mouth, a flat foot, badly-nourished hair, slightly curved long bones, crusty eyelids, will appeal to him so incisively and cry so loud for remedy, that he will wonder how it was possible that in June, 1918, 47 per cent. of California's children who were examined showed such defects, defects that had remained hidden until they were uncovered by the drive of the Children's Year.

But while such thoughts may make us uncomfortable we may well temper them with pleasure when, as Californians, we remember that this stupendous and successful measure in preventive medicine was developed for the nation by Dr. Jessica Peixotto, a woman whose work has been done in our midst, a work in practical sociology we have all known and admired. And we have a further right to be proud of the co-ordination of the medical profession and the laity brought about by Dr. Adelaide Brown as chairman of the Women's Committee of California. She was in no small measure the originator of the splendid system which enabled this state to attain the greatest results with a minimum of effort. The plan adopted overlooked no agency that might be utilized—the State Board of Control, the Boards of Health, Fraternal organizations, Dispensaries, Social Settlements, Nursing organizations, Medical Societies, Women's Clubs, and many individuals were all enlisted and skilfully used. And moreover, they were used in such a way that, as is meet and just, the medical profession was leader and inspirer of the whole campaign. And while the skill of its members was utilized to the full, they themselves were relieved of the burden and drudgery of clerical work. The result is that California was the first of the states, and one of the few that was able to combine efficient medical examination with the weighing and measuring of healthy children called for by the program of Children's Year.

One of the striking outcomes of this work is the demonstration that the urban child is strikingly superior in health to the rural child. This is evidence that the children's agencies, clinics and dispensaries are doing good work, and that the pedatric specialty has justified itself. These agencies, however, reach only a little way beyond the cities and larger towns, and one problem our profession must solve, and solve in the near future, is how to bring these or similar organizations to the aid of little ones who live in the country. It is proposed that the universities and hospitals provide short, free post-graduate courses in subjects that deal with the hygiene of childhood—the restoration of normal posture, removal of adenoids and tonsils, the study of nutritional disturbances, dietetic therapeutics as applied to childhood. Certainly the results of the June examination seem to suggest that such courses were sorely needed. That the physicians outside large centers realize the need for just such work and are willing to aid in it, even under hardship, is shown by the fact that throughout the whole state in the smaller communities, physician after physician gave not only time but his office and equipment in pursuance of this work, and everywhere they found lay women to aid them in improving local conditions.

While we may well be proud of the efforts made, as a profession let us not be satisfied, but let us make each of the drives that are to come in the remainder of the Children's Year more effective than the last, and so far as California is concerned, let us organize so that this will cease to be *the* Children's Year and become the first of the Children's Years in which we shall continue the good work begun and strive to get better and better results until we develop a school population that shall be, as far as is humanly possible, without remediable defects.

EYE HAZARDS.

The Industrial Accident Commission of the State of California has a Safety Department that is doing noteworthy work. By means of a system of safety orders, rules and regulations prepared by committees of employers, employees and others especially interested in each industry, the standards of safety are not only reasonable, but have the advantage of consideration by practical men. This plan is much better than that followed in many states of having legislative committees, usually composed of lawyers, pass specific laws that frequently are impracticable and in need of amendment.

Last month the Journal published a synopsis of an address delivered by Will J. French, of the California Industrial Accident Commission, before the Section on Eye, Ear, Nose and Throat of the San Francisco County Medical Society. His subject was eye injuries in California's industries and the ways of preventing them, and he emphasized in striking fashion the prevalence of eye hazards in industry and the work of the California Industrial Accident Commission in preventing blindness. French states that of the 30,000 killed and 2,000,000 injured in each year in the United States, 200,000 represent eye injuries, and that more than 50 per cent of the 100,000 blind in the United States are needlessly blind. Of 56 types of industrial poisoning, 36 affect the eyes. These figures compel attention and give added interest to the educational and regulatory propaganda of the Industrial Accident Commission. Visitors are cordially invited to inspect the Safety Museum maintained at 529 Market Street, San Francisco.

RED CHEVRON.

During the past month members of the State Medical Society have been receiving communications from the Red Chevron organization, asking them to enter upon an agreement to furnish medical services to the families of soldiers and sailors—without remuneration.

The physicians thus employed are to be given a distinctive badge—a red chevron—as a mark of honor.

The president of this organization is Marshall Breeden and the medical director is Charles T. Cutting.

The attention of the Council was directed to this movement and a thorough investigation undertaken before passing judgment on its merits.

It is the policy of the Government to discourage organizations which duplicate work, or try to cover ground which is already covered by other efforts. The Red Cross should have no competitors. Every County Medical Society has volunteered free medical aid to the families of sailors and soldiers. The Voluntary Medical Service Corps segregates those physicians who are ineligible for military service and will delegate them relief work of a similar nature.

Going into the question of the management of the Red Chevron, it is a conspicuous fact, and not a complimentary one, that the manager of the organization was also the business manager of Dr. Albert Abrams' "Electronic Laboratory." The medical director of the Red Chevron is Dr. Charles Cutting, who is not licensed to practice medicine in the State of California.

The motives of those behind the venture may be very philanthropic and disinterested, but at all events there is a duplication of effort, and not by leaders in our profession on its medical side.

Taking all these features into consideration the Council finds itself unable to recommend that our members participate in the Red Chevron movement and definitely withholds its approval.

If you have joined, cancel your agreement. If you have not joined, don't.

FOR ARMY PHARMACEUTICAL CORPS.

The Edmonds bill (H. R. 5531) should not fail of passage by Congress. It is designed to increase the efficiency of the Medical Department of the United States Army, and would meet a very real need and emergency by creating in the Army a corps of pharmacists for important technical and professional duty.

Almost every prominent nation in the world has recognized the service which a Pharmaceutical Corps can render in the Army, and even in our own service, the Marine Corps, which is doing such splendid service in France, includes under the name of Hospital Corps a group of trained pharmacists, who are rendering splendid service and proving the effectiveness of such an organization. The Hospital Corpsmen of the Marines and of the Navy are doing the type of work which it is proposed to turn over to a Pharmaceutical Corps in the Army. These men, especially when attached to the Marines, have charge of the medical supplies, look after much of the sanitary work about the camp, see that the food and water supplies are adequate and of the proper quality, dispense medicines, act as superintendents of small hospitals, do clinical analysis and bacteriologic work, do the "paper work," and become in fact an all-around aid to the medical officers. Such men are specially trained for this class of work, and this is exactly what is proposed for the Pharmaceutical Corps of the Army. If graduate pharmacists who already have the foundation work in the medical sciences, are given the special training in Army schools, they will rapidly qualify for positions in the Pharmaceutical Corps and thus relieve the dearth of medical officers in our rapidly expanding Army and be of incalculable service to the medical department.

THE NEW CRIMINOLOGY.

One of the most attractive fields of study open to physicians is that which is being found in the gradually growing science of criminology. But a few years ago a man in jail was thought to be merely bad and retribution necessary. Lately, however, due almost entirely to the studies of physicians, a very close relation has been found between mental disease and crime. The more we know of the subject the greater the factor of abnormal mentality appears to be. The bad man is found to be either so unintelligent as to know no better

or to be so abnormal as to lack self-control. These men have been indiscriminately sent to jail and after a fixed period of time released. The law-abiding public were hardly benefited by police and prisons because the same men with the same tendencies were being turned loose at the expiration of their sentence, keeping the number in the community fairly constant. Modern studies seem to show that, regardless of what crime an individual has committed, he may be a permanent menace to society and so need permanent segregation, while another may safely be at large. The important points in determining this social risk, are not brought out by study of the crime which has been done, but by a study of the personal characteristics of the man himself. Today, those best fitted to make this analysis are undoubtedly physicians. Much has been done to develop this work in California, but perhaps the most significant step yet taken, was the recent calling together of a group of experts by the California State Board of Control for a conference at Sacramento. These men were unanimous in urging that classification of the general population of this State be started at once, both on humanitarian and economic grounds. As a result of this meeting a committee has been appointed to draw up plans for a beginning. Once started, this work will continue, for the facts are so obvious, that anyone knowing them will see the way clearly. Given this task, doctors must not fail to study and develop this new science, for it will bring added lustre to the already fair name of the profession.

EDITORIAL COMMENT.

The pernicious practice of counter-prescribing by drug stores should be abolished. It is especially noxious in its ill effects on the nation-wide campaign against venereal disease. Moreover, counter-prescribing, other than the sale of unbroken packages and patent mixtures, is illegal, constituting the practice of medicine, and has been so held by the Attorney-General of Illinois.

Your earnest attention is invited to the obvious fact that while there is a formidable list of County Associate Editors on the first editorial page of the Journal, only a very few of them are doing anything to justify keeping their names on the list. You can tell which ones are active by referring to the County Societies' section. Let's have action. There is news of medical interest in every county every month. Let us have it.

Remember that the cripple and, above all, the war cripple, is not helpless. He needs careful intelligent education or re-education, economic independence by virtue of his own work, and complete lack of any suggestion or inducement to idleness or self-pity. He needs to have his moral determination built up and his outlook kept sane and healthy. He does not need commiseration and excessive social entertainment.

Never forget that typhoid vaccine may be obtained free from the State Board of Health, that it will prevent typhoid, and that there is no excuse for *anyone* having typhoid. *Every person* should have typhoid prophylaxis. Why die of typhoid, when it is entirely unnecessary?

It is a matter of valuable food conservation to practice and encourage home-canning of fruits and vegetables. The increasing prevalence of botulism, as demonstrated by Dr. E. C. Dickson, of the Stanford Medical School, means, however, that certain definite precautions must be employed in the use of such home-canned products. They should always be thoroughly boiled after removal from cans and before serving. Products which are suspicious of having spoiled, should never be tasted even, as the toxin of botulism is so virulent that the merest taste may cause death.

The July *Bulletin* of the State Board of Health notes the occurrence of several outbreaks of bacillary dysentery with rather a large number of cases. Physicians are requested to report suspicious cases at once to their district health officer for investigation. The same methods of disinfection should be employed as in typhoid.

It would be interesting to have an expression of opinion from doctors in various parts of California as to the desirability of the State Board of Medical Examiners holding examinations for license in any language other than English. The particular text is furnished by the present provision of examinations in Japanese for Japanese applicants for licensure. This is but a text and any argument pro or con must apply impartially to all foreign languages. It is said that physicians intending to practice among limited racial groups do not need English and will be more acceptable to their patrons if trained in their respective languages. Is this argument sound? Is it not extremely short-sighted and superficial? Do we really want to Americanize our foreign communities and bring them to American social standards? What do you think? The question is important. Write your opinion to the JOURNAL.

In vacation season how few persons expect and demand the same standards of sanitation as at home. Flies, dirt, vermin, promiscuity of linen, towels, handkerchiefs, drinking cups, etc., unclean food, water and milk of doubtful purity, all are tolerated or ignored. If we would practice what we know and believe of disease prevention, there would be no such criminal toleration and feigned ignorance. On vacation of all times should our sanitary knowledge and skill be tested and exercised. Every Army and Navy camp is an illustration of modern applied sanitary science. Not the vaporings of Eddyism but the solid result-getting circumstantial application of the principles of modern medical science.

Special Article

THE CHILDREN'S YEAR—AN OPPORTUNITY IN PREVENTIVE MEDICINE.

By ADELAIDE BROWN, M. D.,
State Chairman, Children's Year Committee,
San Francisco.

Although statistical charts are heavy reading, this chart of the Weighing and Measuring drive of the Children's Year National Program (which took place in California in June and July, 1918) presents certain facts which cannot but impress the thoughtful student of preventive medicine.

The National Card, which was furnished by the Children's Bureau, is in two sections. It scores the child as equal to the average for his age in height or weight, above or below.

If above in height, then the further question is asked, "Is the weight equal to, above or below, the height?"

On the back of the card is a graded series of measurements of weight and height for boys and girls, monthly, up to forty-eight months; then yearly to sixteen years. This portion of the card goes to the mother; the second portion of the card is filled from the first, and mailed to Washington.

The objects of the weighing and measuring were:

First—To secure data as to averages for the American child, north, south, east and west, rural or urban.

Second—To reduce the appalling infant mortality of the United States, calling attention to the correctable defects of childhood, and to arouse the mothers to *observe* the growth of their children and to understand the value of intelligent guidance, such as the Children's Bureau stands for in the pamphlets it has issued on Pre-Natal Care, Infant Care, and now on Child Care.

The popularity of this program could not be foreseen—500,000 National Cards were ordered by the Children's Bureau, and 6,500,000 were used before July 1st.

Forty thousand National Cards were secured for California, and to date statistics on 40,863 children under six years of age are in our office, and all are not yet in. A state card was issued to supply lack of National Cards.

The management of this work was put into the hands of the Women's Committee of the National Council of Defense, and they called Dr. Jessica B. Peixotto, of the Department of Economics, University of California, to Washington to develop the Children's Year Program.

The State Councils of Defense appointed Children's Year Chairmen, and they in turn had Children's Year County Chairmen appointed by the Chairmen of the Councils of Defense in each county. Thus a state-wide organization was formed.

The Board of Control gave a fund of $5,000 for the expenses of the central office and its printing, postage, organization, etc. The counties have financed themselves. In many cases the Board of Supervisors has allowed from $100 to $1,500 for the year's work.

The interest of the communities has been very great. Physicians have given hours of time, and have received in return big lessons in physical fitness under six. In many smaller towns the doctor has set aside special hours or days in his own office for this examination and for conferences about children.

In the development of the National Program for California we have emphasized the value of frequent physical examinations in children by having three drives through the year. At each one some special feature in child hygiene will be emphasized. Diet of childhood in co-operation with food conservation, was the lesson of the first drive. Three Diet Slips were distributed—

1. The technique of formula-making and average formulas up to a year.
2. The diet from one to two years—solid food, vegetables, reduction of meals, etc.
3. The dietary from two to six, emphasizing chewing food, regular hours, mixed diet, and place of *milk* in child's diet.

In addition, the State Board of Health Bulletin for Children's Year, June 1918, was distributed—15,000 in the state, showing state activities in birth registration, clean milk, contagious diseases and vaccination, dentistry, tuberculosis, and welfare agencies for childhood; and National Children's Bureau pamphlets, Care of Teeth, Clean Milk, etc.

In each county carrying on the drive, local agencies for the care of children, dispensaries, settlements, Public Health nurses, school nurses, school physicians, were all urged to help, and responded generously. Local hospitals were used as headquarters, and in many cases the municipal buildings were invaded. Fraternal organizations opened their doors, and during vacation schoolhouses were used.

A standard equipment, (Chart 2) for the centres was sent to each County Chairman, and the Record Blanks and Diet Slips and literature. The Children's Year Chairman organized her county and did it remarkably well. All the helpers were enthusiastic and tireless in their work. The drive was carried on in 29 counties and 3 large cities handled as units.

What does all this mean?

It means that over 40,000 mothers in our state have stopped and taken stock on their children under six. The frightful turn-down of the draft for physical defects (Chart 3), (35 per cent. of our man-power from 21 to 31 years of age), and the proportion of elimination for correctable defects, must make doctors also pause and take stock. Are we doing all we can do, when Public Health laws and regulations and individual ills are our only points of contact with human life?

As you review carefully the three points that are tabulated—the total defects and their distribution by ages, and the occurrence of tonsil and adenoid defects and of teeth defects (under six)—you realize *at once* that preventive medicine must begin in childhood. The curve is a constantly rising one for each year—31 per cent. show abnormal tonsils and adenoids. Then in addition, note in a climate where food is abundant, cheap,

June Children's Year Drive	Total Examinat.	Total correct. Defects	Defects Under 1 yr.	Defects Under 1-2 yrs.	Defects Under 2-3 yrs.	Defects Under 3-4 yrs.	Defects Under 4-5 yrs.	Defects Under 5-6 yrs.	Below Wt. or Ht.	Teeth defect.	Tonsil & Adenoids defect.	Public Health Nurse	Health Center for Children
County													
Alameda	4656	1994	132	331	371	421	371	368	——	——	1731	Working for Co. nurses	Several planned
Butte	1275	Not segregated.—Physical examination made by doctors.							——	——	——		
Colusa	826	Not segregated—Physical examination made by doctors.							——	——	——		
Contra Costa	3047	809	20	80	142	141	190	236	1105	135	601	Plans for Co. nurse Two school nurses	Two in plans
El Dorado	346	110	3	16	9	16	27	39	177	41	36	Plans for Co. nurse	Yes
Fresno	2240	837	54	91	126	189	161	216	614	108	606	Yes	Yes—daily
Humboldt	505	229	26	35	41	41	51	35	287	43	140	Interested and plan	————
Inyo	550—281	100	3	7	18	27	29	18	118	29	46	————	————
Lake	366	165	5	17	21	26	46	50	193	33	101	No	No
Los Angeles Co.	935	Not segregated.—Physical examination made by doctors.							——	——	——	M. D. for year	Several through County
Madera	850	457	29	55	63	97	89	124	396	——	344	Some plans	————
Mendocino	498	Not segregated.—Physical examination made by doctors.							——	——	——		
Merced	391	21	1	3	3	4	6	4	168	6	12	————	————
Orange	3322	No physical examination made.							598	——	——		
Placer	565	170	8	18	35	30	41	43	263	42	95	————	————
Sacramento	3312	1440	126	173	213	279	326	323	629	222	509	————	————
San Benito	184	67	—	9	12	17	21	8	——	2	63	————	————
San Diego	751	581	41	79	110	109	100	142	428	48	274	Yes (2)	One clinic & 2 centers
San Francisco	3808	2842	222	378	425	525	617	675	1616	421	1896	One Infant Welfare Generally at 13 centers	Two new ones Eleven permanent
San Joaquin	2541	Not segregated.—Physical examination made by doctors.							——	——	——	Has two	Has clinic planned
San Mateo	1641	608	26	71	60	87	101	93	291	80	330	County nurse	Two established
Santa Barbara	1184	740	187	257	208	209	213	291	680	23	360	Visiting nurse S. B.	In Santa Barbara (2)
Shasta	422	388	29	78	69	78	75	59	126	54	234	Plans before Sept.	Plans before Sept.
Solano	982	492	40	93	92	109	98	100	244	28	453	Plan	Plan
Sonoma	1335	1072	54	136	190	217	222	238	156	118	687	One nurse	Two centers
Tuolumne	413	56	2	5	5	10	17	16	100	——	55	————	————
Ventura	367	118	28	6	14	23	23	21	150	——	54	Plans	Oxnard—two Ventura
Yolo	732	466	24	41	98	100	100	145	——	67	390	Plans for nurse and dentist	At Co. Hospital
Yuba	480	258	19	30	34	72	74	29	55	19	178	Plans before City Coun.	Plans
Cities handled as units:													
Los Angeles district	3763	973	72	65	107	154	176	166	380	75	654	Well supplied	At clinics—several
		736	54	56	115	155	163	192	190	74	577		
Pasadena	625	317	120	100	88	—	—	—	55	9 under 3	213	Yes (1)	Two centers—1 new
Richmond	813	189	12	17	42	33	42	43	90	30	148	Plans	No

Total No. weighed and measured 40,863
Total No. examination analyzed 32,167.
Total No. tonsils and adenoids 10,133, or 31 per cent.
Total No. defects 15,261, or 47 per cent.

Total No. tabulated Ht. & Wt. records 29,917.
Total No. below Ht. & Wt. 8,731, or 29 per cent.
Total tabulated for teeth 27,407.
Defective teeth 1678, or 6 per cent.

and where the weather is tolerable, even in our valleys, when you recall the humid heat of the eastern and southern states of the Mississippi Valley, and then see what a large number of your children score below the average in height or weight—29 per cent.

What can we do about it?

The State Children's Year Program emphasizes two things that will help in the great education which must underlie a steady physical improvement of the race:

1. The County Public Health Nurse. There can be no doubt, when one has seen this nurse in action, that the normal contact with the mother can be made by a teaching nurse, highly trained, but humanly sympathetic as well. Our best American standards of health and sanitation can be carried far, wherever this nurse or these nurses are part of the County Health machinery.

2. Children's Health Centres. Outside of the large cities, any type of dispensary or clinic is unknown. The sick person calls the doctor or goes to the County Hospital, but the observation and care of the child, as is done in the Children's Conference or Health Centre, is unknown. A place where any baby or child can be brought, weighed, measured, and its diet and hygiene outlined, and its defects explained, to be corrected by care when possible, or referred for operation or medical attention to the proper points, is urged in all centres of population. A visiting Public Health Nurse and such a centre of observation, has reduced the foundling infant mortality from 59 per cent. to 3 per cent., where it has now remained for six years in San Francisco.

The development in every county of some machinery by which the tonsil and adenoid operations can be done well near home. The great demand and necessity for this operation must take it out of the hands of the specialist, and make the general surgeon, or even practitioner, add it to his field of work. As paracentesis for acute otitis media is done by the pediatricians in Boston, where the examination of the drum is made at each visit to a febrile child—and this complication is most common—so, when preventive medicine is more popularly demanded for childhood, every physician should take the training to do this operation for the removal of tonsils and adenoids creditably.

At this point an investigation has been made of the facilities of our County Hospitals for this work. Some are ready to operate on free cases among children. In the large cities the waiting list is very long at all the hospitals and clinics doing this work. Some County Hospitals refuse and some are in no way equipped to undertake this work. The County Chairmen are all investigating their county resources.

Dental Work as preventive work, is the next necessity. With a few exceptions in larger cities, this work is in its infancy in California, and yet we read that 40,000 school children in Rochester had two teeth cleanings last year, through the Eastman Dental Clinic and the work of dental hygienists, and the Forsyth Dental Clinic in Boston (also endowed) is always full of cases. Infected condition about teeth in childhood may be worked out to be quite as important a menace as focal infections in the body, followed by enlarged tonsils and diseased cervical glands, and the barriers are down for invasion.

As a result of the points urged by the California Children's Year Program, the examination of the so-called well child has been emphasized in established clinics, and seventeen Health Centres have sprung up since the program originated. Several counties have established a County Nurse, and many more have active campaigns on with the Supervisors to lead to this. Los Angeles County has appointed a physician to carry out the Children's Year Program under its Health Officer, making her Assistant Health Officer, and her campaign will be a steady one in all the towns of the county. Ten towns have been covered, and twenty-six more are programmed.

But it is to my mind a more valuable program when local doctors assist, local women organize, and when, together, they work for better county conditions for the homes and children of that county, permanent results are sure to follow.

It is hard work to look over conscientiously forty children in an afternoon, and give a word of explanation to the mother, and there is no way to measure the good you do. As a disinterested person, your advice is respected and often followed at once. The large number of correctable defects (47 per cent.) unearthed in the examination of supposedly healthy children, makes us wonder how to give to all the children what to-day the rich and the very poor homeless ones have—repeated medical examinations and guidance as health protection.

I wish to express at this time hearty and the deepest appreciation of the generous contribution of my profession to the success of California's Children's Year Program. The team spirit has made the first drive successful, and to the Council of Defense Children's Year Chairmen, and those they rallied about them as nurses, lay-assistants and doctors, is due the opportunity for this careful study of our children's health in California.

Original Articles

PLASTIC SURGERY OF NOSE AND EARS.

A Further Contribution.

By GRANT SELFRIDGE, M. D., San Francisco, Cal.

Thirty years ago, June 4, 1887, the late Dr. John O. Roe of Rochester, New York, published in the Medical Record, an article on "The Deformity Termed Pug Nose and Its Correction by a Simple Operation." In the same journal, issue of July 18, 1891, he published another article on the "Correction of Angular Deformity of the Nose by a Subcutaneous Operation" and two years later, in the New York Medical Journal, March 25, 1893, still another on "The Correction of Deformities of the Nose Resulting from Abscess of the Nasal Septum." These articles were the first to appear in this country dealing with nasal plastics. It is to this author, therefore, that all credit is due

for all that has developed in this branch of cosmetic surgery since that time, in Europe as well as here.

Jacques Joseph of Berlin, has in Katz Handbuch given the foundation, by cuts, photographic illustrations of cases and a text poorly descriptive of the work, for much of the work, aside from bone transplants, now being done in America. Even his classification of types has been followed by writers, notably Roberts in his book on "Surgery of Deformities of the Face," and Lee Cohn of Baltimore in his thesis to the American R. L. & O. Society in 1914. I have already followed the brilliant work of Dr. Wesley Carter of New York, demonstrating the value of bone and cartilage transplants in saddle nose, partial and complete, and in notched noses, and presented my work before the County Medical Society of San Francisco at the May, 1917, meeting of the Surgical Section. I will therefore in this paper refer to the following conditions calling for intranasal surgical treatment:

Hump Nose,
Long Nose,
Drop Nose,
Twisted Nose,
Prolapsed Alar Cartilage,

and will also describe the surgical treatment of protruding ears, especially what Beck describes as "roll or dog ears" and Roberts as "lop ears."

Many deformities of the nose are made up of several types, as is shown in the accompanying pictures. For instance, the hump nose is frequently too high, too long and in addition may have a drooping of the tip, too. All these conditions are due to over-development or injury to the bony structures and cartilage. The same mixture of types applies to abnormal ears. No single operation will apply to every case and one must be prepared to handle varying types as they present themselves. The technique of nasal plastic surgery is as follows: The hairs within the nostrils should be carefully trimmed and the skin within the nostrils and the external nose mopped with gasoline, then irrigated with salt solution and iodine solution applied to the skin internally and externally. Novocain solution 1/8 to 1% or quinine bi-sulphate 1% with five or six drops of adrenaline 1:1000 is injected in and around the field of operation, whether general anaesthetic is used or not.

The incision is made in front of the lateral cartilage, in many instances on both sides, and should be carried frequently to the limits of the field of the proposed operation.

In hump nose, the skin with the periosteum should be elevated from naso-maxillary junction of one side to the corresponding point on the other side. The hump is now removed with a saw or rasp and the edges beveled so the nose will not appear too broad on the dorsum after the hump has been removed.

It is rather difficult to know just when a sufficient amount of bone has been removed and in a general way an apparent slight over-correction at the time of the operation will give a better result.

Long nose is corrected by first making an incision at the muco-cutaneous margin on both sides of the septum, then cutting off the end of the triangular cartilage and with it a strip of the mucous membrane, or the entire triangular cartilage may be exposed by a submucous elevation and a wedge-shaped piece of cartilage removed. Next, an incision is made anterior to the lateral cartilages and the skin and periosteum is carefully elevated over the entire nose. Next, the incisions in the septum are sutured and covered with a narrow strip of gauze soaked in tincture of benzoin comp.

It also seems wise to carefully mop the operated area as well as the bridge of the nose with iodine solution. No suture is necessary in the incision anterior to the lateral cartilages. Adhesive plaster is very carefully applied over the bridge of the nose from cheek to cheek and around the end of the nose, from the naso-frontal junction on both sides, care being taken to pull the skin upward and kept there while the plaster is being applied. No intranasal packing is necessary. A sling of gauze should pass over the tip of the nose and be tied around the head. The plaster should be removed with gasoline in forty-eight hours and reapplied for another forty-eight hours if necessary.

Drop nose. This condition may, like the long nose, be due to over-development of triangular cartilage or it may be traumatic in origin. In the former the procedure in long nose is to be followed. In the traumatic type a pocket is dissected in the membranous septum and an inlay of bone taken from the septum or cut from the ninth rib with a small circular saw.

Twisted nose. The skin is elevated as already described and a naso-maxillary suture line exposed. This should be cut through with a saw or Lothrop Slot Forceps. The attachment of the nasal to the frontal bone cut with a fine chisel or Carter's forseps or broken with a blow from mallet on a rubber covered metal instrument handle.

I have not found it advisable to put a metal splint to keep the mobilized nose in position. A careful strapping of the nose is sufficient, unless the patient is in the habit of rolling his head on the pillows. After a couple of days the nose can be kept in position without much difficulty. The patient, however, should be kept in the hospital from two to seven days.

Prolapsed alar cartilage. A condition frequently associated with dislocated columnar cartilages and deflection of the septum. This is corrected by removing an elliptical piece of the mucous membrane, then carefully exposing the lateral cartilage, using a semi-sharp septum elevator and about one-eighth inch exposure of cartilage is made and the cartilage is removed. Two or three silk sutures are introduced and the line of incision covered with gauze, soaked in collodium, or tincture of benzoin compound and left in position until the sutures are removed. The accompanying dislocated columnar cartilage and deflected septum should be taken care of at the same time.

Protruding, Roll or Dog Ears. In general, protruding ears of various types are due to lack of development of the auricular muscles, perhaps associated with an easily stretched skin, or due to

CASE I.

Figure I.

Figure II.

Figure III.

lack of cartilage or too rigid cartilage in the region of the antihelix.

The correction of these ears is done by cutting an ellipse of skin from the back of the ear and the neighboring mastoid with the superficial fascia, care being taken to expose the periosteum and pericondrium which are stitched together with chromic cat gut and the skin sutured with silk worm gut or horse hair. Should it be necessary to remove a portion of the cartilage in the region of antihelix a second ellipse is cut, the cartilage exposed and a piece most carefully dissected from the anterior skin surface.

The greatest care should be taken to carry out to the fullest the rules of absolute asepsis as the danger in this class of aural cosmetic surgery lies in infection of the cartilage, a most disastrous occurrence when it happens.

Figure IV.

Case I presents several interesting features as are shown by the above pictures. Picture No. I shows quite a long nose, No. II the hump as well as the slight droop of the tip. No. III shows the excessive development of the nasal bone and No. IV the after result.

This case was corrected by the removal of the hump subcutaneously and the nose was shortened by taking a strip from the end of the triangular cartilage and a portion of the skin and mucous membrane at the margin of the membranous portion of the septum.

The ultimate result would have been better if a wedge-shaped piece had been removed from the nasal bone and a corresponding strip from the entire bony and cartilaginous septum, then the driving in of the entire nose. This procedure would have resulted in lowering the nose in its full length.

CASE II.

Figure I.

Figure II.

Figure III.

This young man shows a deformity as well as a deviation of the entire nose to the left. This external deviation was accompanied by a very marked deformity of the septum.

The septum was resected, the hump removed intranasally, the nasal bones divided at the junction of the maxilla and the frontal bones. This operation was done under local anaesthetic.

Figure IV.

Figures No. I and No. II show the case before operation, No. III and No. IV the after result.

CASE III.

Figure I.

Figure II.

This young man's external deformity was traumatic in origin and was accompanied by a marked

deflection of the septum. The triangular cartilage was fractured in its full extent, one segment lying at right angles to the other. The septum was resected and the fractured cartilage cut through, the anterior triangular segment was freed from the dorsum of the nose and its attachment in the membraneous portion of the septum. This was lifted up and stitched in a new position in the dorsum of the nose, a new bed made in the membranous portion and restitched there.

Figure No. I shows the condition prior to operation, No. II the result.

CASE IV.

Figure I.

Figure II.

This case shows a lateral deviation of the nose, a hump and a drooping of the tip. He also had a badly deviated septum. The septum was resected, the skin was elevated from the entire bony framework of the nose, the hump removed and the nasal bones divided at the naso maxillary and naso frontal attachments. The drooping of the tip was corrected by making a new bed in the membranous portion of the septum and the transplanting of a piece of the bony septum sufficient to lift up the tip.

Figure No. I and No. II show the appearance before operation. Figure No. 3 the actual result. Figure No. 4 an X-ray showing a piece of bone in position.

Figure III.

Figure IV.

CASE V.

Figure I.

This young man's nose was broken while skating. Figure No. I shows the appearance before he was

Figure II.

operated. Figure No. II the after result. The young man had had a resection of the septum before I saw him. The deformity was corrected by the usual elevation of the skin, followed by the rasping down of the hump. In order to overcome the drooping of the tip it was necessary to re-operate the septum in order to find a sufficient amount of bone to use a graft in raising the tip.

This case represents the great difficulty frequently encountered while attempting to get a satisfactory cosmetic result. In this instance it was necessary to rasp down the bridge three times before the result was satisfactory to the patient as well as myself.

CASE VI.

Figure I.

Case No. VI was operated in two stages. At the first operation the hump was rasped down and at the second operation the deviated septum was corrected and a cartilaginous transplant taken from the septum, was put in a separate bed in the tip in order to raise the tip. Picture No. II shows the result.

This patient had an infection between the septal flaps following operation which was quite bothersome for a matter of ten days but finally cleared up.

Figure II.

VASE VII.

Figure I.

Figure II.

There is nothing particularly to note concerning this case. His nose was broken by being thrown

against a heavy table. There was a marked deformity of the septum as well as the lateral deformity. This was corrected by cutting loose the naso-maxillary attachment and a refracture of the upper end of the nasal bone, the deviated septum being corrected at the same operation. The nose was remodeled. No external splint was used.

CASE VIII.

Figure I.

Figure II.

Figure No. I speaks for itself. This deformity was caused by a dislocation of the tip of the triangular cartilage plus the dislocation of the columnar cartilages.

This was corrected by a removal of the columnar cartilages, a complete separation of the inferior and posterior attachments of the triangular cartilage and the stitching of the anterior border into a new bed made in the membranous portion of the septum. Figure No. II shows the result.

CASE IX.

A careful study of this cut will show the prolapse of the lateral cartilages of the nose into the lumen of the nostril. This is a condition that is very frequently associated with deflection of the septum and not very often corrected. It represents one of the principal causes of failure to obtain satisfactory nasal breathing following resection of the septum.

CASE X.

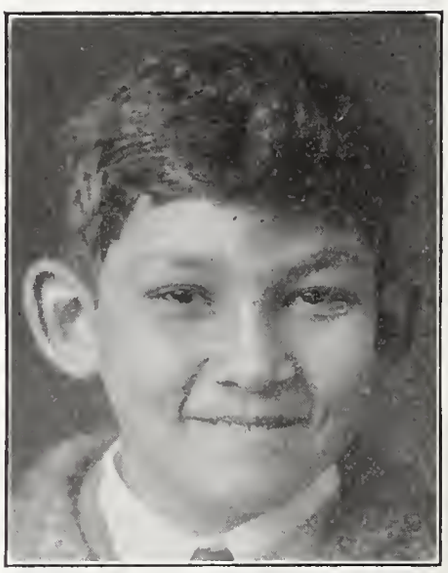


Figure I.

Figures Nos. I and II show the condition prior to operation, Nos. III and IV the after result. This case was corrected by making a double ellipse. The first ellipse was made at the upper marking of the left ear as shown in Figure II.

There was a suture abscess from the buried cat gut in the left ear which did not clear up for a number of weeks.

There was some stretching of the skin back of the ears which I believe would have been obviated had the ears been kept bandaged for a period of several weeks longer than was done. Some keloiding of the skin occurred also in the post auricular incision, which will disappear, I hope, in time. If

Figure II.

Figure III.

Figure IV.

not, a few exposures to the X-ray will no doubt clear it up.

Comments.

Nothing new has been offered in my two papers on Nasal Cosmetic Surgery that has not already been presented by Doctor Carter, with the exception possibly of the use of bone, bone with cartilage, or cartilage transplants in the correction of droop nose so frequently seen in injuries, or as a racial characteristic.

The interesting portion of the work, however, has been noting what can be done with one or more transplants and the end results. This is of particular interest at this moment, because of the many and varied uses of transplanted tissue, not only bone and cartilage, but fat and fascia, now being utilized by French, English and American surgeons in the correction of deformities, the result of injuries obtained in the present European conflict.

240 Stockton Street.

SOCIAL PROBLEMS OF THE WAR.*

DR. H. G. IRVINE,
Director, Bureau of Venereal Diseases, State Board of Health,

and

DR. W. M. DICKIE,
Sanitarian, Bureau of Venereal Diseases, State Board of Health.

Inasmuch as the program includes a paper on the social service and law enforcement phases of this problem, we will confine ourselves to the *strictly medical side.* We wish, however, at the same time, to place emphasis upon the fact that any campaign against venereal diseases must recognize the complexity of the problem and be prepared to attack it from all sides. While many of us who have been intimately associated with the treatment of those afflicted with syphilis and gonorrhea, have realized the terrible economic waste and the untold suffering caused by these diseases, it is a lamentable fact that we needed a great war to produce this psychological moment when the public would arouse itself to a discussion of the solution of this problem. For years carefully compiled statistics of the army and navy have been available, showing definitely the amount of disease in the ranks—figures which were distinctly indicative of conditions in civil life, and yet not until we came into this war and every family in the land began to take a personal interest in the army and navy did we really wake up to the fact that something must be done. Our government early realized the problem with which it must deal, if fit and healthy men were to go to the trenches, and the various agencies under the war department outlined a program of attack, calling upon the states to put it into force.

California may well be proud that it was one of the first states to answer the call and make an adequate appropriation for the organization of the Bureau of Venereal Diseases, which should direct and co-ordinate the campaign in co-operation with the military and naval authorities. The program which this Bureau has sought to put into practice has included an attack from all angles, but as previously stated, we shall in this paper deal only with the *strictly medical part of it.*

From the medical point of view, there are four

* Read before the Los Angeles County Medical Society, April, 1918.

distinct points of attack. The first deals with that group of patients with whom we must employ enforced quarantine and treatment. This includes the prostitutes, the rebellious or incorrigible patient, and prisoners. Incidental with the treatment of this group must be co-ordinated the work of law enforcement.

The second point of attack is directed toward the diagnosis and treatment of that considerable group of people who are unable to pay for adequate medical service.

The third group of patients to whom attention must be directed is the one being treated by private practitioners.

The fourth point of attack must be through an educational campaign.

Many physicians who are interested in venereal diseases have said that we are only concerned in the strictly medical phases of the subject, and that the moral and sociological sides do not concern us, and in this way have attempted to dodge the issues of prostitution and alcohol. Prostitution, we grant, is essentially a matter for the courts to deal with, but history has shown that until the civil authorities have been taught to recognize the relationship of prostitution to venereal diseases, no adequate action is taken by them. It is therefore necessary for us to be concerned not only with the medical diagnosis and treatment of prostitutes, but by demonstrating to the civil authorities the amount of infection in these women to urge upon them adequate enforcement of the laws against the business in general. So far as prostitutes as a class are concerned, when found diseased, quarantine must be rigidly enforced; otherwise it will avail little, especially from the standpoint of gonorrhea, to give them medical treatment.

We wish also to call especial attention to the fact that unless adequate provision is made by the state to prevent them returning to their business, the medical efforts are wasted, inasmuch as they almost immediately become reinfected. It is therefore necessary that adequate facilities be provided for those of them who are feeble minded, and for those confirmed offenders who can only be forced into a life of decency by long term commitments to reformatories, and that proper social service agencies be brought in touch with the younger offenders who can almost immediately be returned to society. The commercial prostitute is a prolific spreader of disease because she nearly always has gonorrhea which may be chronic in nature, and particularly because if allowed to practice her profession openly, she daily exposes from ten to twenty or more patrons. From the standpoint of syphilis she is not so important, as she contracts it early and thereafter is likely to take enough of treatment to keep the disease under control.

Clandestine prostitutes are a danger not so much on account of the number of persons they expose individually, but because there are a great many more of them, and being youthful offenders, are more likely to be acutely infected and less informed as to the care of themselves and their patrons. With commercial prostitutes, the burden of blame rests on the woman, as she more frequently solicits the man. Exception should be taken, however, to the pimp and panderer who exploit her, and these should receive the limit of the law. With clandestine prostitution, the man and woman alike should feel the burden of the law and it is certain there would be fewer such exposures if the man could expect a jail sentence or hospital quarantine for his venereal diseases. We are glad to say that there are communities where judges enforce the single standard and men receive jail sentences the same as women.

The question of commercial prostitution, except from an educational standpoint, is becoming of less consequence in the campaign against venereal disease, inasmuch as there are at present very few cities with a tolerated or segregated district. Since the war began it is reported that twenty-five such districts in cities near camps have been closed. In this regard, Briggs of the Navy, found that at the Naval Station at Norfolk, Va., at a time when there were eighty commercialized houses of prostitution in that city, 85% of the infections were due to commercialized vice.

An effort should be made to make investigation of appropriate groups and institute treatment where indicated. In most cases, state prisons provide adequate hospital facilities, but rarely do we find any attempt made to examine and treat prisoners in city and county jails. Here we have a class of people who are naturally prone to have no regard for rights of others, who are likely to have syphilis or gonorrhea. Arrangements should be made for a careful examination, including Wassermann test, of every prisoner, and treatment should be instituted. If necessary, cases should be quarantined beyond the time of sentence, so that in no case would the individual be allowed his freedom while still in an infectious condition.

Investigations have shown that not over 30 to 50% of patients infected with gonorrhea and syphilis receive adequate medical service at the hands of private practitioners; the remaining large number must either go to drug stores, to dispensaries, or to private practitioners, who, through lack of special training, are unable to give the necessary expert treatment.

In connection with this group, emphasis should be placed upon the fact that the small amount of treatment that these cases receive does no good from a public health standpoint. This is, of course, more true with gonorrhea than syphilis, since the one is infectious so long as it is present; whereas the other may possibly be rendered temporarily non-infectious. The great need is the placing of each patient in that condition in which he or she will not be a danger to others. This means, generally speaking, a cure. The man or woman then who can only afford to pay for a little treatment should be sent at once to a dispensary or hospital, where he or she may receive sufficient and expert treatment. This brings up immediately the need for increased hospital and dispensary facilities. Investigation has disclosed that many large hospitals throughout the country, even those supported by public funds, do not admit acute cases of syphilis and gonorrhea to their wards; this in spite of the

fact that there is always a considerable proportion of patients present in such hospitals suffering from the end results of these diseases. Pressure should be brought to bear to see to it that every hospital supported by public funds should admit cases of syphilis and gonorrhea under exactly the same conditions as other patients are admitted. This problem is more acute in many cities of forty or fifty thousand population, where there is no free dispensary at hand, but it is to be hoped that this campaign against venereal disease will demonstrate not only the need of facilities for venereal diseases, but for other diseases as well, and when these dispensaries are started, they should be made efficient and brought up to the standards adopted by the Board of Health.

There should be adequate social service facilities provided so that cases will be carefully followed up and not allowed to lapse in their treatment. Inasmuch as many physicians, especially in the smaller communities, have no means at hand for laboratory diagnosis, this should be provided for free by the state. This California now does.

CONTROL OF PRIVATE PATIENTS.

Adequate provision must be made for the treatment and especially for the control of private as well as indigent patients. This necessitates the passing of laws or of rules and regulations by the State Board of Health, under which these patients can be required to take the necessary amount of treatment. There should be a system of notification, identifying in some way these persons venereally diseased, and under certain circumstances, when the patient permits himself or herself to become a danger to others, for reporting name and address. Health officers should be responsible for the control of these individuals when they are reported. The rule should also provide for parents and guardians being responsible for compliance of minors. Many physicians believe that notification is bad, inasmuch as they think it will have a tendency to drive patients away from them and into the hands of druggists and quacks. The public in general and patients in particular should be informed carefully that these reports are absolutely confidential and that so long as they continue treatment and conform to the necessary rules, their names and addresses need not be divulged, and even if the name and address are reported, the health officer's record is also a private and confidential one. So far as druggists are concerned, rules should be passed preventing counter-prescribing, or the sale of any preparation or nostrum to be used in the treatment of syphilis or gonorrhea. Investigations in some places have disclosed the fact that no less than 50% of the men applying to dispensaries for treatment of gonorrhea have first gone through the hands of the druggist or quack, and what might at first have been a simple case has now become a chronic and complicated one.

We wish also to call attention particularly to one point in this connection. We have been informed by many army surgeons that they know indirectly of their men being given drug store treatment. This ought to be condemned for two reasons. In the first place, on account of the men themselves getting inadequate treatment, and in the second place, because it prevents the army surgeons from placing these men under control, inasmuch as every soldier having syphilis or gonorrhea is confined to the camp. This prevents entirely any opportunity for his spreading infection among the civil community. We believe it will be possible by a campaign of education to practically put the quack out of business. Generally speaking, the control of these cases going to private practitioners depends entirely upon the hearty co-operation of the medical profession, both individually and collectively. It is to be hoped, particularly at this time, when all of us are anxious or should be anxious to do everything possible by way of war service, that physicians will pledge themselves to this co-operation.

EDUCATION.

A systematic education of both laity and physicians to the danger of these diseases, to their prevalence and to the needs of adequate treatment, is perhaps the most important of any single method of attack. This must include talks and lectures to various groups on sex hygiene by proper persons. Talks to mothers and fathers are especially necessary in order that they themselves may inform their children. The distribution of proper literature and the placing of exhibits will also be of service. The stimulation for the provisions of proper recreational facilities in communities now without them, and the greater use of those at hand, is important. Proper education will do more toward preventing the individual from becoming infected than any other one thing that can be done. This educational work is of distinct importance in formulating the necessary public opinion in order to secure more women police, better juvenile detention homes, to decrease sex immorality and to point the way toward that single standard of morals for both sexes, which, when it comes, will go a long way toward wiping venereal diseases off the map.

WHAT HAS BEEN ACCOMPLISHED IN CALIFORNIA.

With these four points of attack as a basis, what has been done and is being done in this campaign in this state? It should be understood that our Bureau does not pretend to take credit for all that has been done—that we merely state those things which are results of the campaign in which the Bureau has taken an active part. Law enforcement is now being pretty actively carried out in every large city of the state. This means that police departments are seeking evidence against places being conducted as houses of prostitution, that prostitutes are being apprehended and given jail sentences and that district attorneys are generally making use of the Redlight Abatement law. In many small cities there were still tolerated districts where houses of prostitution were allowed to run openly. During the past six months of these districts have been closed. In each instance our Bureau has attempted to see that all inmates were properly examined, quarantined and treated. That this work has had a marked effect on reducing the problem is shown by the police court records. In San Francisco, in the Women's Court in October, before the campaign

started, nearly four hundred women were charged with crimes of moral turpitude, whereas in February, less than one hundred appeared in court,—this in spite of the fact that not only an efficient morals squad was continually working, but many federal and military investigators as well. The reduction in the number of prophylactic treatments in the various military and naval stations throughout the state is suggestive of the decrease in the number of exposures, this resulting from making the prostitute inaccessible. Records in San Francisco indicate that exposures and infections in the army at this point were practically cut in two within thirty days of the inauguration of this program.

In connection with this work, San Diego has appropriated over $27,000 for the building, equipping and maintaining of a special detention hospital. The work is being done by special staff, organized under the health department. The hospital has thirty-five beds, and since the opening of the hospital March 14th, twenty cases have been admitted.

The Los Angeles city health department, under the direction of the Bureau of Venereal Diseases, remodeled and equipped a fifty-four bed hospital for the exclusive care and treatment of prostitutes infected with syphilis and gonorrhea, which is known as the Los Feliz hospital. It has sixteen private rooms and two wards, an operating room and especially equipped douche room, besides a large assembly room, kitchen and administrative quarters. The staff consists of a woman clinician, a vocational teacher furnished by the city school department, a matron, nurses and cooks. The health department has also established large free municipal clinics for men and women. The clinics are open three nights a week; the women's clinic is in charge of a woman clinician. There has also been established a well equipped dispensary in the women's department of the city jail and also one at the East Side jail for the treatment of men. The county has also established dispensaries for men and women in the county jail and also free clinics for indigent cases, which are open six days in the week.

Every morning at 9 o'clock, all women confined in the city jail, having been arrested during the preceding twenty-four hours, are examined by a woman clinician, smears and blood taken from each case and sent to the city laboratory, and on report of these findings, along with the clinical diagnosis, cases are quarantined and immediately sent to Los Feliz hospital. On being admitted to this hospital, each case is given an antiseptic bath and a complete change of clothing, which is provided by the institution. Their street clothes, after being fumigated, are put away and not returned until they leave the hospital.

As soon as a case becomes non-infectious, the woman is returned to court and if given a suspended sentence, she is referred to the municipal clinic for further treatment and observation. In case she is sentenced the treatment is continued in jail.

All men arrested are also examined daily and if found infected are given a sixty days' sentence and sent to the East Side jail where they are treated until non-infectious and then paroled. These cases, on being released, are also referred to the municipal clinics for further treatment.

The county program is identical with the one adopted by the city, with the exception that all cases are sent to the county jail and from there transferred to the Los Feliz hospital, the men remaining in jail and receiving treatment in the jail dispensaries.

It can be seen from this brief résumé that all women arrested for vagrancy, either in the city of Los Angeles, or any of the thirty-six incorporated cities of the county, if infected, find their way to the Los Feliz hospital; the men, on the other hand, receive adequate treatment in the jail dispensaries during their term of sentence.

During the months of February and March, there were examined in the city and county 681 male and female prisoners, 389 of which were infected, and over 7000 treatments were given.

Riverside county is also establishing a special detention hospital, adjoining their county hospital, which will accommodate twenty patients. They are also establishing a free municipal clinic. These two institutions will be open before the aviation camp is completed.

Santa Barbara is building a new hospital for acute infectious diseases, a section of which will be set aside to be used as a detention hospital for venereal diseases. A most excellent dispensary is being conducted in connection with the Cottage Hospital.

San Francisco set aside a special ward in the San Francisco hospital for the isolation of these court cases, as well as organizing a clinic at the jail for examinations. Up to February 1st, there had been a total of 556 examinations made. Of these, 285 were found diseased and 24 were incompletely examined. Attention should be called to the fact that this percentage of positive findings is not as large as we found in many places, and there is one point to be considered which may explain this to a certain extent. In the first place, the conditions of the examination were such that many patients were able to prepare themselves for the examination; in other words, to take means to thwart the positive findings. In the second place, the examining physicians have had constantly to be in a position to legally prove all their statements, in case a lawyer should attempt to remove the patient from quarantine by a writ of habeas corpus. There are many cases where a physician is morally certain of a diagnosis of gonorrhea, and yet is unable to produce evidence to hold in court.

In Oakland, Sacramento, San Jose, Fresno, Bakersfield and many smaller communities, arrangements have been made for examination and isolation of these patients in the county hospitals. In San Diego, Los Angeles and San Francisco, arrangements have been also made for the examination, diagnosis and treatment of all prisoners in the city and county jails. Nearly 20% of these people have been found to have syphilis from complete Wassermann surveys made, and nearly 50% to have syphilis or gonorrhea. All military

and naval stations in the state report regularly to the state or local health authorities sources of infection and a definite effort is made to apprehend and place these individuals under treatment.

In regard to the stimulation of increased hospital and dispensary facilities, it is a question if the state would not do well to imitate the plan proposed and carried out in England—namely, that of providing a subsidy to the extent of 75% of the cost of establishing local venereal disease clinics. Our Bureau is distributing free salvarsan for syphilitics and this undoubtedly has resulted in getting more cases diagnosed and treated, but it is a question if the offer of this service is sufficient in itself to secure the desired results. Up to April 1, the Bureau has distributed 1660 doses of salvarsan, which have been given to 393 patients, or an average of 4.2 doses per patient. This is undoubtedly a much larger average than would have been true had this same group of patients been treated in the ordinary channels. It is interesting to know that this salvarsan has been distributed to 32 different hospitals, dispensaries, and health departments throughout the state, showing that the propaganda has reached nearly all quarters and that the state as a whole is receiving the benefit of this free salvarsan.

In San Francisco, in addition to the facilities for treating court cases, the five emergency hospitals have been opened for treatment of venereal disease cases and the new budget, as proposed for the San Franicsco health department, includes, in addition to the present program, the use of a pavilion at the County Relief Home, which may be used for detention purposes, and which will house between 50 and 100 additional patients, and also the formation and maintenance of an adequate outpatient service for men and women at the San Francisco hospital with day and evening hours.

In Los Angeles, the county hospital now admits all acute cases of syphilis and gonorrhea needing hospital care; 50 doses of salvarsan have been given. Juvenile Hospital, which is connected with this institution, has 18 beds and treats from 13 to 16 cases a month, having administered 62 doses of salvarsan since the first of January.

In Fresno, the county hospital is now paying especial attention to venereal disease patients. A social service department has been inaugurated, which is in charge of follow-up work, and up to March 1 a total of 35 patients were being treated for syphilis. The city of Fresno has enlarged its municipal clinic to include venereal diseases and has now a well equipped department, including excellent laboratory facilities and social service department. The dispensary is open two nights a week, as well as day hours.

In Bakersfield, the supervisors have agreed to supply funds necessary to devoting a ward of the county hospital to venereal disease patients and to supplying the present county physician with an assistant who will take particular charge of this work. Plans are under way for the opening of a municipal clinic in Stockton, Oakland and Riverside.

Arrangements have also been made whereby infectious cases can be treated under the direction of the local health officers, particularly in small communities where there is lack of hospital and dispensary facilities. Salvarsan can be supplied by us on a health officer's requisition. As an emergency the Bureau has been able to offer the services of the state board of health laboratory to all army and navy posts for Wassermann tests. Many camps have taken advantage of this, as laboratory facilities in some of them have been insufficient. For several years California has had a law requiring reporting of venereal diseases, but only by initials or office number. In October, these rules and regulations were amended to partly cover the situation, and again at the March meeting, amendments were made so that at the present time the rules and regulations conform generally to the standards suggested by the surgeon-general's office and to those being adopted by other states.

Notification is required by serial number as furnished by the State Board of Health, said number to be made a part of the physician's record in the case. If the patient lapses from treatment, the name and address are to be reported to the State Board of Health. Provision is made for the compliance of minors to these rules and regulations. Provision is also made for requiring the reporting by druggists of all cases to whom they sell any medicine to be used in the treatment of venereal diseases. It is believed that this rule will bring them within the requirements of the Medical Practice Act and thus automatically prevent their sale of the remedies in question. Patients known to be in the infectious stage and not so conducting themselves as not to endanger others, may be placed under quarantine.

We are prepared at once to inaugurate a definite campaign to enforce the rules and regulations in regard to reporting, and as a first step in this campaign all physicians and druggists of the state will be notified by circular letter of the changes and requirements of the law. The Bureau has issued and distributed to physicians several thousand copies of a pamphlet on syphilis and its treatment, and a pamphlet on syphilis and gonorrhea, with information and instructions to patients, has been issued and over 10,000 have been distributed. There is now a rule that every patient shall be given one of these pamphlets.

Members of the staff of the Bureau are frequently asked to address clubs or other groups of men and women, and this offers opportunity for a considerable amount of educational work. Plans are being made for definite courses of lectures in various parts of the state and an exhibition is being planned which will tour the state. With this exhibition will go an attendant whose duty it will be to answer questions and give advice on sex hygiene and venereal disease and distribute proper literature. A special effort will be made in connection with this exhibit to advertise in each place the local dispensaries. In co-operation with the Commission on Training Camp Activities, our Bureau has been supplying lecturers who give what are known as supplemental lectures to the soldiers and sailors. These men are officially accredited

by the Commission and we arrange the details and pay the expenses of the work. Up to date these lectures have been given in Camp Kearny, Camp Fremont, to the Naval Stations at San Pedro, San Diego, Mare Island and San Francisco. It is estimated that not less than 45,000 men have been reached in this way. The lecture follows an official syllabus issued by the surgeon-general's office and is illustrated with stereopticon slides.

The Bureau has also had printed and distributed several thousand placards to be used in comfort stations and in the latrines of the camps, which give information as to these diseases and their dangers. When these placards are used in the civil communities space is left on them to be devoted to advertising the venereal disease dispensaries of that community. The Bureau has purchased a stereomotograph, with the necessary slides, and this has been permanently loaned to the army and navy for use within the camps. Several of the army surgeons have expressed themselves as to the very great success of the use of this machine. Attention is especially called to all work which has been done in co-operation with the army and navy, since it was for this purpose that our Bureau was primarily organized.

Although the entire campaign against venereal disease was originally undertaken with a view to its effect on our fighting forces, the War Department is doing everything possible to see that the work is extended into all civil communities. This is absolutely necessary in order not only to really protect our fighting forces, but also for the protection of our industrial army whose efficiency is becoming more and more important. We must change our tactics which have in the past directed our efforts almost entirely toward taking care of these diseases at the wrong end. We have been spending our money taking care of blind children, of the hopeless insane, or hopeless paretics, and the confirmed invalids resulting from the early ravages of these diseases.

Let us now not spend necessarily any more money, but let us spend it in taking care of those afflicted in the early stages of their disease, when something actually can be done. Let us take care adequately of these cases in their beginning that we may finally save not only thousands of lives from such misery, but literally the millions of dollars now spent annually in taking care of the hopeless results of our own neglect.

AN ANALYSIS OF THE FIRST TWO HUNDRED CASES STUDIED AT THE SAN DIEGO DIAGNOSTIC GROUP CLINIC.*

By B. J. O'NEILL, M. D., San Diego, and ROBERT POLLOCK, M. D., San Diego.

In the rapid advance of internal medicine during the past two or three decades nothing stands out more prominently than the increasing demand for accurate diagnosis. This demand is expressed not only by the physician of himself and his fellow practitioners, but to a certain extent it is shared by the public.

Scientific medicine has long been distinguished from the various cults with which it is forced to compete by the effort on the part of the former to accurately diagnose the condition of the patient and to carefully estimate the relations existing between the patient's condition, his inherent physical resources and his environment. That physicians recognize the importance to diagnoses of assembling the views of two or more consultants, has been evident for a long time in the practice of holding consultations in obscure or grave cases. Informal consultations by the clinicians have long characterized the service of charity clinics and the charity wards in our hospitals. An attempt to supply such service in a broad way to those who can afford to pay a modest fee is expressed in the so-called Consultation Clinic of the Massachusetts General Hospital, now in its third year. The more pretentious attempt on the part of St. Luke's Hospital diagnostic group to furnish complete diagnoses to all classes is well recognized throughout the state. Our San Diego experiment having just closed its initial year is probably still unknown to many of the members present. Broadly, it is based upon the lines of the St. Luke's Hospital group, but presents one or two points of difference, which as they change to some extent the character of the patients furnished, exercise a bearing upon the end results we wish to present.

In accordance with the known ideals of the benefactor of the clinic, Mr. E. W. Scripps, it has accepted cases only from the family with an income of $100 per month or less. With a liberal interpretation of the word specialist, the executive has enlisted the interest and services of approximately half of the members of the County Medical Society. Using fifteen specialists to a group and changing the group each month, we have exacted less of the individual's time. At the same time the interest in the clinic and the cultural value developed by it have been widely distributed throughout the profession.

One of the greatest values from this method of diagnosis lies in the fact that conditions are many times brought to light which, while not causing his present complaint, furnish valuable data for the patient and his physician to possess.

The following routine laboratory examinations were made in every case, unless some strong contraindication existed: Blood, 24-hour urine, fresh stool, blood Wassermann, Von Pirquet skin reaction (later discontinued), phthalein efficiency test of kidney and fractional study of stomach secretion.

Of the 200 cases analyzed, 114, or 57 per cent., were females, while 86, or 43 per cent., were males. They ranged in age from 21 months to 74 years, with an average age of 39.1 years.

Our end results here tabulated are far from being complete, chiefly due to the fact that so many of the physicians through whom only the cases could be traced have left their practices and gone into the country's service. Thus out of 200 cases, 43, or 21.5 per cent., could not be traced.

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

Six cases, or 3 per cent., gave subsequent evidence of having been faultily diagnosed, usually by reason of something having been overlooked. One hundred and one cases, or 50.5 per cent., were reported as having improved since leaving the clinic. Forty cases, or 20 per cent., were reported as unimproved, such unfavorable outcome being in most cases foreshadowed by the diagnosis. Ten cases, or 5 per cent., have since died.

We have allowed from 6 to 12 months' time in which to get some estimate of the results of treatment based on the diagnosis furnished. As each examiner passed judgment upon his field only, the assembling of the various examinations showed that the majority of cases presented abnormalities of more than one kind.

In classifying in groups the conditions diagnosed, in a rough attempt to draw conclusions from them, we must remember that several pathologic conditions may be present in the same individual, exerting an influence one upon the other or upon the outcome. Thus the same individual may be classified under several pathologic headings, and his improvement or lack of it may be due to the intelligence applied in treating him as a functioning organism and not merely as a bit of pathology.

Abnormalities in the mouth, nose and throat were so almost universally present that we have not attempted to classify them. Practically all mouths from which the teeth had not been entirely removed contained one or more roots upon which the X-ray looked with suspicion. About 80 per cent. of all cases had tonsils or tonsillar remnants from the crypts of which pus could be expressed, while hypertrophied turbinates and other abnormalities of the nose were frequently observed, as were also the results of catarrh of the Eustachian tubes and middle ear. While these conditions rarely furnished sufficient explanation of the complaints of the patient, it was interesting to note how frequently improvement commenced after treatment was inaugurated by the removal of teeth or tonsils.

Next in frequency came the diagnosis of chronic appendicitis, never made without the support of the radiographer, and we might say never made by him alone. This group consisted of 21 cases, of which 7 cases, or 33.3 per cent., were subsequently treated surgically; while 10 cases, or 48 per cent., of the group were treated without surgery, the other 4 cases of the group not being traceable. Of the 7 cases treated surgically 5 were improved, while 2 at last reports still retained their symptoms. Of the 10 cases treated non-surgically 7 were reported improved while 3 remained unimproved. Thus surgery reflected credit upon itself in 71 per cent. of the cases it treated, while medicine could boast of but 70 per cent. of cures, or temporary cessation of symptoms.

Into another group, comprising also 21 cases, we have placed the psychoneuroses, exhaustion-psychoses and psychasthenias.

Somewhat to our surprise we received reports of improvement more or less marked in 13 cases, or 62 per cent. In the case of many of these, treatment included the removal of some infection. Four cases were reported as about the same, one was in Patton, while the other three cases could not be traced, but early report stated that each of these was intractable.

Tuberculosis furnished a group of 18 cases, made up of 14 lung cases, 2 tuberculosis of kidney, one of the spine and one of the intestine. Nine cases, or 50 per cent., of the group were reported improved, 3 unimproved, 3 not traceable and 3 dead.

The diagnosis of syphilis was made in 15 cases, many times in the face of a negative Wassermann. The cases that improved under treatment practically established the diagnosis thereby. The group comprises 7 cases of tabes, one cerebrospinal case non-tabetic, one arteriosclerotic, one syphilis of the stomach.

Eight were reported improved, including 3 tabetics; four were reported not improved, while 3 could not be traced. One of the traceable ones was reported as absolutely refusing treatment, although he had a 4 plus Wassermann.

Cholecystitis with or without stone was diagnosed 13 times. Stone was shown by X-ray in 2 of the cases; stone was demonstrated in 2 of the cases by surgery. Six cases of the group of 13 were reported improved, including the operated cases and 4 that were not operated. Three cases were not traceable. Of the remaining 4 cases reported as unimproved one has carcinoma of liver with ascites, one has an endocarditis that forbids operation, while a third continues to have typical colic attacks but refuses operation.

Peptic ulcer furnishes an interesting group of 9 cases. Of these 6 cases have improved, 2 are about the same, while 1 is dead. The 6 cases that were treated surgically present the following analysis: One case of perforating ulcer high up on the lesser curvature posteriorly had the ulcer dissected out and is doing excellently after eight months. Two extensive long-standing ulcers of the duodenum are doing well several months after gastroenterostomy, as is one case of ulcer in the stomach antrum. One case diagnosed as duodenal ulcer that had had a gastroenterostomy previously done with only temporary relief, was relieved again for a few weeks by the removal of a diseased appendix. The case of ulcer reported as dead occurred in a patient who also had pulmonary tuberculosis, thus furnishing a poor operative risk. We found in our cases that the hyperchlorhydria symptom complex more often represented a diseased appendix than a peptic ulcer, but that the former usually took second place when expressing intensity of symptoms.

Carcinoma furnished 8 cases for study. Three cases of carcinoma of the pylorus, in one of which the disease had spread to the liver, are still living. One case of carcinoma of the cardia, also living, although very anæmic. This case is interesting in that, while every clinical evidence of cancer was present, two X-ray studies reported him roentgenologically negative. One case of carcinoma of body of stomach has since died.

One case of carcinoma of the liver is still living, although ascites has been frequently relieved by tap. One case of carcinoma of liver improved under rest and digitalis, although not well at last reports. A second case diagnosed carcinoma of uterus proved after hysterectomy to be non-malignant. Thus in 8 cases diagnosed carcinoma, the diagnosis proved to be incorrect in 25 per cent. Undeniable evidence of our shortcomings is an excellent stimulus to better work.

A group of varied conditions involving the muscles and joint structure may be loosely classified as follows: One case of sacro-iliac strain, results not traceable; one case general arthritis deformans, refused treatment; one case osteo-arthritis and synovitis of elbow joint, improved and able to work; one case of arthritis of right knee, much improved; one case relaxed sacro-iliac joint, not changed; one case periostitis of head of tibia, improved; one case involuntary post-cervical spasm, unchanged; one case of painful joints accompanying tabes, unchanged.

The remaining conditions not occurring oftener than six times we have not attempted to analyze, but merely mention. Six cases each of endocarditis, and hormone imbalance. Five cases each of arteriosclerosis, myocarditis, epilepsy, neurasthenia, and inflammatory condition of pelvis. Four cases each of neuralgia. Three cases each of colitis or enterocolitis, asthenia, nephritis, prostatitis, uterine fibroid, amoebic infection, dementia praecox, and pyelitis. Two cases each of general visceroptosis, hypochondriasis, renal stone, pernicious anemia, rickets, cardiac hypertrophy, and dilatation. One case each of peri-nephritic abscess, uremia, toxaemia, psychopathia sexualis, chronic pancreatitis, partial heart block, vertigo, lateral sclerosis of cord, extreme constipation, meningitis, mutism, cystitis, trigonitis, urethral caruncle, brain tumor, acute pneumonia, urethritis, sigmoiditis, diabetes insipidus, pleurisy with effusion, hysteria, pityriasis rubra, and Dietl's crisis.

The diagnoses here classified must be looked upon as major diagnoses to be reckoned with in the summing up that was sent to the referring physician. Besides these there were an infinite number of minor conditions recorded in the reports of the examiners, but to avoid confusing the main issues, not included in the reports sent to the referring physician, who however was always advised that the full reports were filed subject to his scrutiny on request.

Thus we admit that only a rough analysis of the main results has been attempted. This group of cases if thoroughly worked could furnish material for several papers. Each specialist on the group could make an attractive survey from the viewpoint of his especial interest.

The group diagnosis furnished was substantiated by operation, by autopsy or by written report from the physician who subsequently followed the course of the case in 151 of the 200 cases under discussion. Six cases were reported as having been faultily diagnosed, while the balance, consisting of 43 cases, have not been reported on at the time of writing. These statistics would suggest that this plan of study furnishes a high percentage of broad diagnoses upon which to base intelligent treatment, as well as supplying much data of life-extension value. We must bear in mind also that the clinic charges sufficient for the diagnosis to warrant its having referred to it only problem cases.

That the efforts of the clinic to furnish adequate diagnosis has been appreciated by the physicians referring the cases is evidenced by the almost unanimous expression of satisfaction, only three letters of criticism having been received in response to a questionnaire on this point.

From the standpoint of the staff, its members in common with all physicians referring cases to the clinic enjoy the benefits of having their cases broadly examined and discussed and returned to them for continuance of treatment. However, at the same time they are a unit in feeling that the cultural value to themselves expressed by the study of the cases and their discussion by the group method is amply worth the time and effort expended, furnishing as it does the most practical kind of graduate clinical work.

INTESTINAL OBSTRUCTION.*

By HARLAN SHOEMAKER, M. D., Los Angeles.

An analysis of the histories diagnosed intestinal obstruction in cases occurring at the Los Angeles County Hospital during the years of 1915-16-17 show some very interesting facts that may be profitably considered at this time. It was Agassiz, I believe, who said, "study nature and not books," and I have found the rehearsing of these histories much more interesting from the standpoint of intestinal obstruction than any text-book article I ever read on the subject. No one history is complete. No one history covers all the symptoms of this very complicated condition, but when all the histories are viewed together as a whole there is not a single point, I believe, that has been mentioned on the subject of intestinal obstruction that has not been brought out in this, that, or the other case. It is in an effort to focus the attention of the profession on some of the outstanding symptoms of intestinal obstruction that a review of these histories has been undertaken.

During 1915 there were thirteen cases recorded; during 1916 twenty; and during 1917 ten cases. There were undoubtedly cases of volvulus, tuberculous peritonitis, and strangulated hernia that are not included in this list, as the records were not searched under these diagnoses.

There is scarcely an operator, or a member of the attending staff, that at some time or other has not had something to do with one of these cases. Furthermore I venture to state that a great number in this room have been interested in one, or more, of this type of case, so I think that our further analysis should be interesting to those present. There has been an average mortality of about 55 per cent., which I consider is an extremely good average when you take into consideration that in this collection of cases of obstruction you get ob-

* Read before the Forty-seventh Annual Meeting of the Medical Society, State of California, Del Monte, April, 1918.

structions from tuberculous peritonitis, which is nearly invariably fatal, and general peritonitis following a previous operation, which at a secondary operation is invariably fatal.

There has been no attempt to eliminate any particular class of cases, but merely to give you a resume of what the histories in these cases actually stated. Approximately 45 per cent. entered the hospital walking, which is to be wondered at when you consider the seriousness of their condition. With a great many of these patients, even when they approach the operating table their general well-being belies the condition that is ultimately found in the intestinal tube, when exposed to the examining surgeon's vision.

Excepting those cases which developed in the hospital, the average duration of the obstruction prior to entering the hospital was between three and eight days. Intestinal obstruction followed previous operation in 23 per cent. of the cases. These operations dated from a week to six years prior to the time the obstruction occurred. The principal cause of obstruction in these cases was, peritonitis in two; tubercular peritonitis in two, particularly in colored people; bands, hernias, diverticulum made up the rest of the obstructions, with one case of impaction from feces. Cathartics had been attempted in all the patients and in only one had the bowel been ruptured. If we recall that clever little verse that Moynihan published a number of years ago, in which he stated that:

"Perforation meant purgation, of the appendix
kinked and bad,
Food and drink annoy him, and aperients drive
him mad"

we might wonder why the obstructed bowel is not more frequently ruptured by the cathartics that are taken. My theory in this matter would be that the catharsis is promptly vomited because of the reverse peristalsis that is set up within seventy-two hours after the obstruction becomes complete.

Pain is the outstanding symptom in these cases of obstruction. All of them have begun with pain, more or less of an agonizing character, and sudden in onset. The pain at first is generally diffused, then localizing itself more or less in the epigastrium, and finally becoming localized possibly at the site of the obstruction of the intestine. If the obstruction is of some duration when seen, the pain gradually becomes a negligible quantity as the gangrene of the intestine encroaches upon the continuity of the well gut. Pain existed in one case over a period of twelve years. The patient was rather young, and it might make you suspect that very slow and insidious disease, tuberculosis of the peritoneum. This was the ultimate diagnosis. In the young I should always suspect tuberculosis as a cause of obstruction. In this series the patients were past middle life.

The second, and one of the most conspicuous clinical features of intestinal obstruction is vomiting. Vomiting occurred in every one of these patients. Vomiting began usually from twenty-four to seventy-two hours after the beginning of the obstruction, as denoted by the pain which the patient described as the onset of the condition. Vomiting was frequently preceded by belching of gas, and this, I take, is probably the very earliest symptom and certificate of the reverse peristaltic wave. Many of you who have read any of Cannon's articles which ran through the Journal of the American Medical Association along about 1899 to 1904 of "The Physiology of Digestion and Normal Peristalsis" will recall that he stated in his paper that a reversal of peristalsis took place from a point in the gut wherever an injury or insult was sustained, and continued until that insult or injury had either been removed or relieved, and possibly some eighteen or twenty-four hours afterwards. Therefore the presence of belching of gas and vomiting should make us suspect that an injury had taken place within the gastro-intestinal tract.

Now as to the abdomen. The third clinical symptom refers to the abdomen, and that is distension. The abdomen was distended in all of these cases, and this distention may, or may not take typical shape, depending upon the condition found at operation. Visceral distention may, or may not persist, depending whether the patient has vomited prior to the time that the examination has been made. If the patient has been lying at home without medical care the distention may be excessive, due to the vast amount of water that has been taken by the mouth to overcome the thirst. No better clinical evidence is wanted in the manner and place of water absorption from the gastro-intestinal tract. Obstructions three inches cephalad to ileocecal valve with the proximal gut full of fluid are attended with all the signs of failure of water absorption, dry tongue and anuria. I mean by distention any condition of the abdomen that could not be called a scaphoid abdomen. If the epigastric depression is obliterated as the patient lies on his back I should consider that patient slightly distended. In a great many of these obstructed cases distention is not so very severe.

Tenderness is the fourth clinical symptom I should like to call your attention to. All these patients showed some type of tenderness in the abdominal region. The localization of tenderness on palpation is the one symptom that requires the most experienced judgment. Only the experience of the palpating hand can pass judgment upon the tenderness, and can give it an evaluation that somewhat resembles the pathological underlying causes. I might illustrate this by stating that two cases included in this series were eliminated from it because the tenderness described was over the innominate bone and around into the back. Other symptoms led me to believe that in one case there was a marked pyonephrosis of the right kidney, and in the other case a history of gonorrhea and a complete relief in both of these cases by enema confirmed my belief that it was the kidney involved and not the intestinal tract, hence these cases were eliminated from this series.

Abdominal rigidity is the fifth clinical symptom I wish to call your attention to. It occurred in nearly 26 per cent. of this series, was absent in 52 per cent., and not stated in 22 per cent. In one

case the abdominal rigidity only occurred during the paroxysmal pain. The fact that one can make deep palpation in these cases frequently misleads and the tenderness is overlooked. If light palpation had been pursued prior to the deep kneading of the abdomen the examiner would have obtained a better clue probably to the localization of the obstruction of the intestinal tract than the presence or absence of muscular rigidity of the overlying muscles of the abdomen could give. I have an impression that most of the obstructed cases can be deeply palpated.

The sixth clinical symptom of particular interest in these obstruction cases would be the presence or absence of a tumor mass. Eighty-two per cent. of the cases in this series failed to show any tumor. A volvulus of the sigmoid as large as your head, or six or eight feet of intestine surrounded by a band, and gangrenous, failed to produce a palpable tumor mass. In the 18 per cent. of the cases in which a tumor was felt, one was a case in which the intestine had been ruptured by purgation. Another was a distinct gas tumor of the cecum. This is rather unusual, but it was easily palpated.

I have taken up peristalsis as the seventh clinical symptom in the diagnosis of intestinal obstruction. Peristalsis may be present, according to the stage of the obstruction and the time of the examination. Peristalsis is visible in 13 per cent., and present to auscultation in 13 per cent. Of course at the time of vomiting you will all admit reverse peristalsis wave exists in all of the cases. Auscultatory peristalsis can best be heard with the ear to the abdomen, lightly applied. There is always some possibility in using the stethoscope of adventitious sounds being interpreted as a peristaltic click. After gangrene has once involved the intestine the abdomen as a rule is as quiet as the grave, as far as peristalsis is to be heard. Deaver mentions the tinkle of fluid lying in the distended gut as the patient is moved being confused with peristalsis. A patient, with marked obstruction, passed gas after the obstructed symptoms had begun. This is very unique inasmuch as the peristaltic wave of the colon has acted independent of the entire peristaltic without any exciting wave cause such as drastic enema. The expulsion of gas from an enema given, I do not consider due to peristalsis, as the gas may be expelled by displacement by the induction of fluid into the anal canal. Twenty-five per cent. of this series expelled gas and feces with the enemata and 75 per cent. were absolutely constipated.

Constipation I should consider the eighth, and my last clinical symptom of any note. All these eight symptoms that I have mentioned can be easily ascertained by the physician with a bedside examination. The fact that they have not been estimated in any one history is due more to our hurriedness and our over-sight than any technical skill on our part.

To repeat, pain, vomiting, distention, tenderness, rigidity, presence or absence of a mass, or presence of peristalsis, either visible or auscultatory, or its absence, or the presence or absence of constipation, and add to this a normal body temperature with a rapid pulse, make, I think, a clinical picture of the obstruction of the intestines that needs no further investigation. This train of symptoms is brought about by a toxemia rather than of a purely dynamic origin. I have some evidence of this in so-called strangulated hernia which proved to be strangulated omentum. In these cases the entire sequence of symptoms is repeated. The continuity of the gastro-intestinal tract has not been interfered with.

In a number of these cases a good many special diagnoses were entered into. The blood count, for instance, showed a leucocytosis in every case counted, from twenty to thirty thousand. A slight albumen reaction, with renal tube casts was present. In the feces mucus was invariably found. In one case a stomach analysis had been done.

This series of cases was treated both medically and surgically. Some of the cases were treated medically by the surgeons, and some of the cases were treated exclusively medically by the attending staff. The mortality does not vary much by the various methods of treatment. A few lucky cases have been saved by timely operation. This is particularly true in strangulated hernia, volvulus, and one or two types of gangrene of the intestines. The latter, however, are too few even to mention, being about 1 per cent. of the whole.

If I were giving an ideal treatment of obstruction of the intestinal tract, and I saw the patient when the obstruction had begun, and vomiting was present, it would be about as follows:

I would first give a soap suds enema, not a drastic enema. If that were not successful I would repeat it once. My next move would be washing of the stomach. In this series of cases it is only noted that the stomach was washed in two of the patients. This is certainly to be regretted, because every single one of them had the same type of fecal vomiting. If only for sanitary reasons alone the washing of the stomach would have been beneficial to any one of these patients. A great deal may be learned from the inspection of the stomach contents. Lavage is really the only safe thing that can be done in these cases prior to operation. In stomachs that are not washed, the minute that the anaesthetic is given and there is a relaxation of the diaphragm and the cardiac end of the stomach, there is liable to be a flooding of the air passages by the fluid that has been taken into the stomach to relieve the thirst, and the patient dies immediately after by asphyxiation or drowning. In the history of the patient in which the stomach was washed as a therapeutic measure, it is very interesting to note. The interne had attempted to wash the stomach several times, but the vomiting had been so profuse that he finally gave up. This gives you an idea of the enormous amount of fluid that may be contained in the stomach and small gut. He then resorted to filling the stomach full of mustard water. The emetic worked favorably; relaxed the entire gastro-intestinal tract, and he was rewarded with a stool as well as a clean stomach. There is no medication indicated in these intestinal obstruction cases, but it is a noted fact that the minute they partake of an emetic such as mustard water or apomorphine there will be produced a re-

laxation along the entire gastro-intestinal tract. That emesis from the use of apomorphine is frequently followed by a well-marked evacuation of the lower bowel is familiar to all of you. Having evacuated the lower bowel and washed the stomach free from all its contents my next order would be to give nothing by the mouth. This means no ice, and no water, and nothing to wash the mouth out with that an extremely thirsty man could swallow. I would make up the deficiency of the intake of water by the mouth by giving it either intravenously or by hypodermoclysis, or if possible by a Murphy drip. This would circumvent any acidosis; had it existed prior to my beginning, soda bicarbonate would be added to any, or all of these injections. If with this treatment a normal peristaltic wave did not resume of itself within thirty-six hours, I would certainly advise an immediate operation.

At operation I would not expect to find a gangrene of the intestine because intestines do not become gangrenous unless they are distended with fluid. A great deal of intestine can be crowded into a very small space provided there are no contents in the gut. If the patient was then so unfortunate as to come to operation I should say that the quicker the loop of gut was isolated and clamped off the less liability there would be of a toxemia, and the greater liability there would be of a successful outcome.

CLINICAL ASPECTS OF THE FASTING TREATMENT OF DIABETES.*

By ALBERT H. ROWE, M.S., M.D., Oakland, Cal.
Assistant in Medicine, University of California Hospital.

The fasting treatment of diabetes has been used long enough to demonstrate that it lengthens the life of diabetics and removes many of their symptoms. When we realize this fact and also remember that there are probably at least from twenty to forty thousand diabetics within our state, we readily see the importance of studying this method introduce by Allen about five years ago. No physician should attempt this treatment without a thorough understanding of its principles. Fortunately this can be obtained through the study of Joslin's recent book.

In that monograph, the modified Allen treatment as followed in the best clinics to-day, together with exact directions for laboratory tests of value in the study of diabetics are described. Besides this, the complete discussion of diabetes with an exposition of dietetics as applied to the disease, as well as many case histories, are included.

To treat diabetics by the fasting method with the minimum of fatalities requires above all else the ability to perform certain laboratory tests. The diacetic acid reaction is the most important one to understand outside of the urinary sugar tests. It is, however, at times misleading, as will be shown later. It, moreover, must be accompanied by either Marriott's or Fredericia's method for alveolar CO_2 determination or by Van Slyke's CO_2 blood test. The alveolar CO_2 is much easier to measure than the blood CO_2 but the latter is more accurate and can always be obtained even in coma. The estimation of ammonia in the urine is very simple and though it is the least important of all those already mentioned, when high it makes us a little cautious in our treatment.

Tests for blood sugar, blood lipoids, acetone, B-hydroxybutyric acid and diacetic acid in urine and blood, as well as urinary nitrogen, and blood chlorides are aids to a more perfect treatment but not essential to its success.

It is not my purpose to go into details about these methods, for this has been done in the writer's recent article in our state journal.

Since we acknowledge the importance of this fasting method, let us briefly summarize it as prescribed by Joslin:

Fasting is approached gradually by first omitting all fats, then by decreasing the proteins and carbohydrates, eliminating the carbohydrates last.

If glycosuria persists, the patient is fasted four days, being allowed water, coffee, and thin clear broths as desired. Then if the urine is not sugar free, 1 gram of protein or .5 gram of carbohydrate per kilogram of body weight is given for two days, followed by fasting for three days. This intermittent fasting may be repeated if the urine still contains sugar.

When the urine is sugar free for twenty-four hours, the carbohydrate tolerance is determined by giving 5 to 10 grams of carbohydrate in the form of 5% vegetables, increasing this by an equal amount daily.

When the urine has been sugar free for three days, 20 grams of protein in the form of egg-white, fish, or lean meat is given and increased by 15 grams daily until the patient gets 1 gram of the protein per kilogram of body weight or less if the carbohydrate tolerance is zero.

Fat is then added in 5 to 25 gram amounts cautiously where acidosis is present, and in amount only to where the diet contains 30 calories per kilogram of body weight.

When sugar returns, fasting is in order until the urine is sugar free and then the former diet is resumed, fat being added last in order to keep the carbohydrate tolerance as high as possible. If the tolerance for carbohydrate is less than 20 grams, one fast day weekly should be ordered, whereas if above that amount, the diet should be cut in half one day every week.

Similar directions to the above are printed on a small card which Joslin has arranged and which is obtainable from Thomas Groom of Boston. The opposite side of this card has a condensed table of food values with which both patient and physician can estimate the grams of carbohydrate, protein, and fat in nearly all foods desired.

I have referred to Joslin so persistently because of his remarkable clinical experience with the fasting treatment. He deserves great credit for perfecting many of the details of Allen's original method and also for contributing to science many valuable metabolic studies on his patients. When

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

one sees his skilful care in handling cases in his diabetic hospital in Boston and observes the minute laboratory control of his patients, one is willing to respect any new ideas he offers.

For nearly three years, I have been studying this fasting treatment.

While on the staff of the Massachusetts General in Boston, I saw all the diabetics treated in the wards and many of those in the outpatient department, as well as a number under the care of Joslin and in certain large hospitals of other cities, especially New York. During the last two years, I have observed in private practice 40 diabetics, many of whom have been treated by the fasting method outlined above. During this period of study and clinical use of the treatment, certain aspects have particularly impressed me as important to emphasize to physicians who use it.

The importance of careful histories and thorough physical examinations is evident. To facilitate this, I have prepared a printed history form so that all patients have the same thorough history and examination done. It is necessary to search out all foci of infection, especially those in the mouth. Cystitis must be cleared up, if necessary through the aid of the urologist. Routine Wassermann reactions should be made on all cases.

Though Williams recently expresses doubt about the view of Warthin that syphilis is the chief etiologic factor in diabetes, it is nevertheless rather frequent. Four of my private cases have had positive Wassermanns which coincides fairly well with the statistics of Williams, Rosenbloom, and Joslin. Tuberculosis, arterio sclerosis, abnormalities of the heart, kidneys, and nervous system must be discovered.

It is hardly necessary to state that the treatment already outlined must be varied to suit the individual case. Severe cases must, of course, be in a hospital with well-trained nurses. Moderate cases can be treated easily from the office. The latter must report daily, save 24-hour specimens of urine and if intelligent bring in reports of diets prescribed. Some cases require no fasting and others several intermittent periods. Rarely cases cannot be fasted because of great weakness. Moreover, the testing of the tolerance can be rapid if the case is mild.

It must be emphasized, moreover, that the patients should learn the approximate caloric values of foods and should never exceed their tolerance. The intelligent patient who learns food values thoroughly, finally gains the power to judge weights of foods and caloric values, so that no scales or cards are necessary. These patients can eat nearly any food in amounts not to exceed their tolerance. The uneducated patient, on the other hand, must stay on a set diet known by the doctor to keep him sugar and acid free. These latter cases are slightly unsatisfactory but are as necessary to treat as any other.

The weight of the diabetic must not be far above normal, especially in severe cases. In fact it is often necessary to reduce weight well below normal to destroy acidosis or glycosuria. It is often futile, moreover, to try to increase weight since its loss characterizes the disease. Food taken in excess of that which just does not produce glycosuria is not used by the body and is a real poison since ketogenic bodies and excessive sugar in the body tissues are produced. Thus practically all diabetics should be below normal weight and no steps should be taken to increase it unless it is more than 15 to 20 per cent. below normal.

Recently Mosenthal and Clausen have described a maintenance diet as one which should allow a moderate amount of physical and mental work. Usually 1500 to 2000 calories suffice for this diet and small people need even less.

The diet should contain enough nitrogen to offset the loss through the urine and bowels. Some diabetics unfortunately cannot stand even that amount of protein without glycosuria. In them, protein must be lowered and weight reduced to where metabolism can be supported by the food intake.

It is far better for the diabetic to live on 20 to 25 calories per kilogram with a much reduced body weight than not to live at all. It seems now as though my one unsuccessfully treated case of last year might have been saved if I had been content with a caloric intake of 700 calories. She might have died of inanition, but the possibility exists that her tolerance might have increased.

Exercise is most necessary for diabetics and should be prohibited only when coma threatens or the heart is weak. Allen showed in 1915 that the carbohydrate tolerance rises and ketonuria decreases with exercise. Joslin over three years ago favored exercise even during starvation and Williams recently has shown that weakness experienced by some diabetics is due to lack of exercise and that under-nutrition does not decrease physical vigor while over-feeding results in serious loss of strength.

It is important to realize that successful treatment necessitates self-denial and will power on the part of the patients. They must know the danger of breaking their diets. We all have heard of diabetics being thrown into coma by indulging themselves on some special day.

But even with the prospect of health and activity ahead of them, some patients are unable to stick to their treatment. One of my young patients recently who developed an excellent tolerance, failed again and again to deny himself extra food and thus made my attention useless. Patients must understand that we can only improve their carbohydrate tolerance by keeping them sugar free for many months and possibly years. To be sure that young patients are doing this, it is necessary to keep in touch with them continually until their own judgment can be depended upon. The young diabetic tends to cheat himself more than does the older one.

The physician, moreover, must try to regulate the habits of the patient even in the smallest details. He often must readjust the home environment and must guide the mental activity of his patients. In other words the life of the patient should be smooth and devoid of the many sources

of irritation and temptation which might detract from his improvement.

Finally and most important of all, the physician must understand the causes and prevention of acidosis and the treatment of impending coma. Rapid changes in food, a salt free diet, excess of fat, or a strict fat-protein diet must be recognized as possible causes of acidosis. Thus the very gradual reduction of diet instead of a sudden and complete starvation should be the rule in all cases.

Moreover, the importance of enough carbohydrate in the diet to burn the ketogenic substances has been emphasized by Woodyatt, and is a most important measure to prevent acidosis. It is in this latter respect, indeed, that the modern treatment differs from the old, which formerly produced a sugar free urine only to initiate acidosis.

The great importance of laboratory tests to foretell acidosis must be dwelt on again. However the clinical symptoms are fully as important, and drowsiness, rapid breathing, restlessness, diarrhoea, nausea, or vomiting must all be regarded suspiciously. A recent case brought out of coma will serve as an illustration. A boy of 22 years with a diabetes of about 6 months' duration was first seen so drowsy he could hardly think and had nausea and vomiting. His alveolar CO_2 was 20 mm., his diacetic acid was zero, and he had 5% sugar in the urine. This shows the importance of clinical observation as well as the worthlessness of the diacetic acid reaction. The next day his alveolar CO_2 tension was 15 mm., his diacetic acid reaction 2 plus and his ammonia over 5 grams while he was nearer complete coma than the day before, Kussmal breathing being marked. Here again the ammonia and the diacetic acid did not give the correct idea of the severity of his acidosis, which was well shown by his alveolar CO_2. Three days later his symptoms were much better, his alveolar air equaled 25 mm., his ammonia was nearly 7 grams and his diacetic acid 5 plus. From the urine one would think he was not so well as before. These figures show the importance of running several tests for acidosis and also of constant clinical observation of the patient.

When confronted with possible coma, what shall be our procedure? One of the most radical changes in the treatment of diabetes is that proposed recently by Joslin to do away with soda bicarbonate altogether even where coma threatens. In this type of case, he puts the patient into a warm bed, gives him an enema, washes out his stomach, gives at least 1000 cc. of fluid every six hours if necessary, rectally or intravenously, some of this fluid being normal saline, prescribes digitalis for the heart, feeds him as much carbohydrate as was excreted in the urine on the day before and administers no alkalies or cuts them down by 30 grams daily if they have been given previously. He has tried this method in 15 cases threatened with coma, and acidosis and glycosuria have cleared so quickly that he feels it should be tried in all such cases.

It will be of value to comment on the treatment of the boy already referred to, who was recently brought out of coma. Joslin's recommendations were first followed. The alveolar CO_2 tension fell from 20 mm. in the first 24 hours to 15 mm. and this in spite of high carbohydrate feeding, rest in a warm hospital bed and ample fluids. His stomach was not washed until 12 hours after being first seen. The importance of this procedure was shown by the removal of a great lot of undigested food taken the day before. Twelve hours later he became so drowsy he could hardly be roused and I then felt it necessary to resort to large doses of alkalies, giving 130 grams during the following 24 hours. The CO_2 in his blood remained for two days at 21 vol. per cent., but since then it has steadily increased to normal. For several days he passed over 7 liters of urine and one day over 14 liters. He has steadily improved since then. By the use of soda, a second case of threatening coma with an alveolar CO_2 tension of 15 mm. and marked Kussmal breathing was rescued about one and a half years ago.

In contrast to the above cases, I have had two cases in girls of 20 and 12 years who showed alarming signs of acidosis. Both were brought out of danger by fasting, one with no alkalies and the other with an insignificant quantity. Thus it is seen that the best treatment of threatening coma is at present in debate. Palmer, only three months ago, wrote concerning the treatment of threatening coma, "Alkali certainly in indicated." I shall try to do without alkalies wherever possible, since in large doses they undoubtedly cause a great strain of the kidneys. But I shall be ready to administer alkalies to my diabetics if I feel it necessary until the question about the correct treatment is settled.

The results in the cases I have seen are of interest. One case has had an increase of carbohydrate tolerance from 28 grams to over 200 as a result of either antiluetic treatment or of the eradication of extensive pyorrhea, due to the extraction of all the teeth. A man of 64 who had marked functional nervous disturbances and great weakness has been sugar free for 1½ years and has lost all his former symptoms, eating three times the carbohydrate he did when discharged from treatment. A patient suffering with a carbuncle, immense and deeply penetrating, had been practically given up by his physicians. The fasting treatment quickly made him sugar and acid free and now, four months later, he says he never felt so well. A business man with a very low tolerance has kept sugar free for one and three-fourths years without any symptoms and able to tend to his business continually. These are only types of the improvement noticed in practically all patients treated. Complications, such as cystitis, pruritis, and disturbances of the central nervous system, as well as many of the diabetic symptoms are cleared in whole or in part by the fasting treatment. Of the forty diabetics seen during the last two years, five have died. Two of these were first seen about 12 hours after becoming unconscious in coma. One died of pulmonary hemorrhage, due to tuberculosis. Another died in coma after she had developed myelitis. The latter was the only one of my cases that failed to develop a satisfactory tolerance and has been referred to before. The

Referred by Dr. T., Oakland. Diabetic given up because of carbuncle. Remarkably successful results with surgery and fasting treatment.

Date	Vol. c.c.	Sp. Gr.	Reac.	Alb.	Sugar in Urine: Diacetic acid	Ammonia Total G.	Reduction %	Total G.	Diet in Grams: Carbohydrate	Protein	Fat	Calories	NaHCO$_2$ G.	Max. Temp.	Blood Sugar %	Blood Co$_2$ mm. Hg.	Alveolar air CO$_2$ mm. Hg.	Remarks.
1917																		
Oct. 11	3200	1030	Ac.	S. T.	0	?	5%	160	Light hospita	diet			0	103.6		61	40	Carbuncle 7 inches at least in diameter.
" 12	2460	1025	Ac.	S. T.	0	1.5	3.5%	86.	10	20	0	120.	0	102.4	.22		40	Patient delirious, high temperature.
" 13	2320	1022	Ac.	S. T.	0	1.2	3%	70.	5	15	0	80.	0	102.6			45	
" 14	1950	1020	Ac.	S. T.	0	1.1	2%	39.	0	0	0	0	0	102.			45	
" 15	1320	1010	Ac.	S. T.	0	.3	0	0	6	0	0	24.	0	101.			45	
" 16	1450	1011	Ac.	S. T.	0	.5	0	0	9	0	0	36.	0	102.			45	
" 17	2700	1008	Ac.	S. P. T.	0	.5	0	0	14	12	12	212.	0	102.				
" 18	2430	1008	Ac.	S. P. T.	0	.8	0	0	20	27	17	341.	0	101.				
" 19	2340	1010	Ac.	S. P. T.	+	.7	0	0	26	58	50	786.	0	101.4				
" 20	2100	1010	Ac.	S. P. T.	++	.8	0	0	25	78	75	1087.	0	101.6			45	Diacetic Acid reaction due to Salol.
" 21	2310	1010	Ac.	S. P. T.	++	.6	0	0	30	75	75	1095.	0	101.4				
" 22	1860	1010	Ac.	S. P. T.	++	.6	0	0	30	75	100	1320.	0	100.6	.16			
" 23	1500	1010	Ac.	S. T.	++	.5	0	0	35	75	110	1430.	0	101.				
" 24	1500	1017	Ac.	S. T.	++	.6	0	0	35	75	125	1565	0	100.4				
									Diet did not exceed the values given below from present date to Dec. 9.									
" 25	1380	1012	Ac.	S. T	++	.5	0	0	35	75	125	1565	0	101.2				
" 26	1360	1010	Ac.	S. P. T.	++	.5	0	0	35	75	125	1565	0	101.				
" 27	1410	1009	Ac.	S P. T.	+	.4	0	0	35	75	125	1565	0	100.4			45	Temperature continued for 10 more days.
	Above record continued daily until Nov. 3, when salol was stopped.																	
Nov. 3	1680	1016	Ac.	S. P. T.	0	.3	0	0	35	75	125	1565	0	99.4				Small doses autogeneous vaccine, intravenously three times 3 days apart, helped.
Dec. 9	1460	1015	Ac.	S. P. T.	0	.4	0	0	35	75	125	1565	0	98.			45	Left hospital.
1918																		
Mar. 20	?	1020	Ac.	0	0	?	0	0						Carbuncle all healed.				Looks and feels well. Has kept sugar free contin.

Girl aged 20. Acidosis destroyed by fasting treatment. Tolerance good. Weight gained. Death due to return to regular diet after taking up Christian Science.

Date	URINE: Vol. c.c.	Sp. gr.	Reac.	Alb.	Diacetic	SUGAR: Amm. G.	Reduction %	Total G.	DIET IN GRAMS: Carbohydrate	Protein	Fat	Calories	Soda Bicarb. G.	Weight lbs.	Blood Co2 mm. Hg.	Alveolar air Co2	Remarks.
1916																	
Jan. 1	3000	1036	Ac.	s. t.	++++	1.36	5.	150	Fairly	general	diet		12	96	.24	40	
" 2	700	1020	Ac.	0	++++	1.59	1.5	10.5	25	40	0	260	16			45	
" 3	1440	1010	Ac.	0	+++	1.2	.3	4.2	20	20	0	160	12			45	Wassermann negative.
" 4	3000	1011	Ac.	0	+++	1.	0	0	15	10	0	100	6			45	61.4 Vol. per cent. Co2
" 5	2310	1010	Ac.	0	+++	1.	0	0	2	0	0	8	4	95½		45	bound by blood plasma.
" 6	1980	1010	Ac.	0	+++	1.	0	0	9	25	0	136	0			37	Headache and nervous.
" 7	1500	1014	Ac.	0	++	2.3	0	0	20	40	0	240	0			40	
" 8	1590	1014	Ac.	s. t.	++	2.4	0	0	25	50	25	525	8	94		45	
" 9	1230	1011	Ac.	0	++	1.2	0	0	26	50	50	754	8			45	
" 10	1320	1012	Ac.	0	++	1.1	0	0	34	54	79	995	8			45	
" 11	2100	1011	Ac.	0	+	.5	0	0	34	60	100	1276	8			45	
" 12	2070	1013	Ac.	0	+	.4	0	0	36	60	125	1509	8				
" 13	1590	1011	Ac.	0	0	.3	0	0	38	60	140	1652	8				
" 14	?	?	Ac.	0	0	.4	0	0	28	60	140	1652	8	103			Home from hospital.
" 15	2200	1020	Ac.	s. t.	+	.6	0	0	62	89	82	1342	0				Marked diarrhoea.
" 16	2000	1015	Ac	0	0	.5	0	0	48	61	119	1487	0		.17		
" 17	1000	1021	Ac.	0	0	.8	.2	2.0	43	64	86	1202	0				
" 18	2100	1012	Ac.	0	0	1.	0	0	26	31	62	786	0	102½			
" 19	2500	1015	Ac.	0	0	.9	1.	25.	28	57	83	1087	0				
" 20	2200	1010	Ac.	0	0	.6	0	0	0	0	0	0	0				
" 21	1500	1015	Ac.	0	0	.7	0	0	13	37	114	1226	0	103			Ate pie against orders.
" 22	2000	1020	Ac.	0	0	1.	0	0	21	50	109	1265	0	103			Severe headache all
" 23	2000	1015	Ac.	0	0	.7	0	0	26	34	113	1257	0				night
" 24	2000	1015	Ac.	0	0	1.3	0	0	32	49	137	1557	0				
" 25	1500	1025	Ac.	0	0	1.1	.8	1.2	45	47	110	1358	0	101½			
" 26	2000	1010	Ac.	0	0	.6	0	0									
Feb. 2	2000	1022	Ac.	0	0	1.1	0	0	44	49	147	1695	0				Had cold to-day and
" 9	1750	1015	Ac.	0	0	.5	0	0	"Never felt so well. am gaining weight, every one remarks								went over diet.
Mar. 2	?	1017	Ac.	0	0	?	0	0	how well I look."								
Apr. 12									"I know you are disappointed in my actions."								
May 4									Patient died in coma in spite of several letters and personal appeals to persuade her to give up Christian Science.								

Referred by Dr. A M. T., Sonoma City, California.

Uncomplicated response to treatment in spite of chronic nephritis. Diacetic acid reaction caused by Acetysalicylic acid.

Date	Vol. c.c.	Sp. Gr.	URINE Alb.	Chlorides	Diacetic	SUGAR Amm. Total G.	Reduction	Total G.	DIET IN GRAMS Carbohydrate	Protein	Fat	Calories	Blood Sugar %	Alveolar air CO2	Weight lbs.	Remarks.
1918																
Mar. 5		1025	.12		0		6.		Mod. restricted diet.				.165	45	128	
" 6	2100	1027	.15		0	.6	.8	17.	20	30	0	200		45		
" 7	2415	1018	s.t.		0	.4	.5	12.	15	15	0	120		45	125	
" 8	850	1016	.12		0	.2	0	0	20	30	0	200				
" 9	1000	1022	.1		0	.3	0	0	9	0	0	36		45	123	
" 10	625		.2		0	.2	0	0	15	0	0	60			122	
" 11	1000	1015	.1		0	.1	0	0	20	12	12	236			122	
" 12	1045	1019	.1		0	.2	0	0	20	26	23	391			120	
" 13	1225	1020	s.t.		0	.2	0	0	25	43	33	569			119½	
" 14	1725	1014	s.t.	13.8	0	.4	0	0	25	55	45	725			120½	
" 15	1500	1015	s.t.	12.0	0	.2	0	0	30	60	60	900				
" 16	1500	1014	s.t.		0	.2	0	0	30	62	90	1178				
" 17	1750	1016	s.t.		0	.3	s.t.	?	35	62	120	1468				
" 18	1530	1015	s.t.		0	.2	0	0	10	0	0	40				
" 19	1650	1025	s.t.		++	.2	0	0	30	60	120	1440			126	Aspirin produced diacetic.
" 21	2000	1022	s.t.		0	.2	1.	20	Three glasses of wine and 3 slices of bread taken in addition to above.							
" 25		1025	s.t.		0	?	0	0	30	65	130	1550				

Referred by Dr. C. H., R., Oakland, California.

Case followed since Oct., 1916, showing: (1) Remarkable increase in Tolerance in spite of gain of weight, due either to anti-syphilitic treatment or to eradication of pyorrhea. (2) Production of mild acidosis by fasting relieved by intermittent fasting, reproduced by extraction of teeth under gas anesthesia.

Date	Vol. c.c.	Sp. gr.	Diacetic	Chlorides	Am. G.	Reduction %	Total G.	Carbohydrate	Protein	Fat	Calories	Soda bicarb. G.	Weight lbs.	Blood Urea m. g	Blood Co2 mm hg.	Alveolar air Co2	Remarks.
1916																	
Oct. 13	1821+	1030	0			7.	127+	28	88	0	154	4	208			45	Salvarsan .6. Hg. rubs begun. Walking about 4 miles. Slight headache and diarrhoea. Slightly weak. Feeling better.
" 14	1160	1030	0			3.	35	12	25	0	148	4	206				
" 15	1800	1027	+		1.5	1.2	22	15	51	0	264	4	203				
" 16	1110	1023	++		1.5	s		10	0	0	40	4	203			40	
" 17	1440	1020	++++		2.3	s		0	0	0	0	20	201		47.1	35	
" 18	900	1024	++++		1.2	s		12	0	0	48	20	201			40	
" 19	840	1023	++++		.9	0	0	35	0	0	140	4	203			40	
" 20	1440	1024	+++		1.3	.4	5.8	96	0	0	384	4	204			40	
" 21	930		+++		.8	s		0	0	0	0	4	201				
" 22	840	1020	+++		1.1	0	0	0	0	0	0	4	200			45	
" 23	1800	1012	+++		1.3	0	0	6	0	0	24	4	199			45	
" 24	1015		+++		1.5	0	0	9	0	0	36	4	198				
" 25			+++		1.9	0	0	14	18	18	250	4	196				Salvarsan .6.
" 26			+++		1.5	0	0	20	52	35	603	4	194				
" 27	?		+++		1.6	0	0	20	52	50	738	4	193			40	
" 28	1440	1011	++++		.8	0	0	20	64	60	884	4	193			35	
" 29	1050	1019	+++		.8	0	0	0	0	0	0	4	196		46.2	40	Left hospital.
" 30	1700	1011	+++		?	0	0	0	0	0	0	8	204				
" 31	1600	1017	++		.8	0	0	18	60	32	600	8	202				
Nov. 1	2400	1013	+		.7	0	0	21	120	70	1194	8		28.8			
" 2	2600	1016	s. t.	16.4	.8	0	0	21	102	39	843	8				45	
" 3	3200	1011	+		.23	0	0	20	69	62	914	8					Teeth extracted; gas taken.
" 4	3300	1012	++	12.8	2.32	0	0	20	111	72	1172	8			74.8	45	
" 5	1300	1022	+++		1.36	2.4	31.2	28½	62	56	866	8					
" 6	1900	1021	++++		1.62	0	0	2	20	30	358	8	202	22.1			
" 7	2200	1019	++++		1.13	0	0	13	91	50	866	8	201				
" 8	1900	1020	++++		1.04	0	0	Went home to Sonoma									Salvarsan .6.
" 16			0			0	0	25	100	165	1985	0					1 week after leaving my care; feeling extra well. Work helps him assimilate food. He can handle 40 carbo. daily.
" 20	2000	1022	0		1.06	0	0	57½	118	178	2304	0					
Dec. 4	2000	1022	0		1.13	0	0										
" 29		1020	0			0	0	"Can eat freely of bread and potatoes when working hard." "Can eat a good meal of bread and potatoes."									
1917																	
Mar. 6			0			0	0	210	82	201	2977		210				
Sept. 14			0			0	0										
1918																	
Mar. 1	2100	1019	0		.9	0	0	Eats 10c candy at times as well as mince pies, peaches with sugar and other similar foods.									Still using anunctions.

Referred by Dr. A. P., Oakland, California. Ambulatory case. Treated from office. Tending to his ordinary business continually. Low carbohydrate diet. Absence of acidosis throughout treatment. Benefit with loss of weight. Observed for 2 years.

Date	URINE Dia-cetic	Nitro-gen G.	Amm. G.	SUGAR Reduc-tion %	DIET IN GRAMS Carbo-hydrate	pro-tein	Fat	Calo-ries	Weight lbs.	Alveolar air Co2	Remarks.
1916											
Sept. 25	0			.9	Very light carbohydrate diet					40	(Marriotts' Method)
Oct. 2	0		1.1								slight headache.
" 4			.6	0	8	69	70	938	180	45	
" 12	+		.7	1.	48	141	119	1836	180		
" 14	0		.8	.6	6	121	111	1507	179	45	
" 16	0		0	0	3	17	19	251	177		
" 18	s+		.8	s+	3	95	97	1265	177		
" 20	s+			.3	0	0	0		177		
" 22	0		.3	0	6	0	0	24	176		Patient feeling fine.
" 23	0		.2	0	13	18	20	304	176		
" 24	+			0	20	35	9	301	174		
" 26	+	12.5			15	67	29	689	175		
" 30	0			s+	0	0	0	0	174		Broth only.
" 31	0			0	0	0	0				
Nov. 1				0	10	71	55	823		45	
" 2	s+		7	0	10	90	71	1035	174		
" 5	0		.7	s+	20	103	127	1575	173		Van Slykes Co2 tension in
" 9	0			2.5	20	72	125	1493	173		blood=57.6 Vol. per cent.
" 10	0			sl+	0	0	0	0			
" 11	0			0	2	48	103	1127			
" 12	0		.8	0	6	72	137	1545	172		
" 20	0		.34	1.3	18	79	163	1865	172		
" 26	0		.2	0	8	88	130	1563	172		
Dec. 3	0		.43	0	8	103	178	2066	171		
" 6	0			0	8	88	177	1977	171		
" 13	0		.09	.5					170		Patient has had traces of
" 20	0			0	10	91	167	1900	170		sugar for 3 days. Feeling
" 27	0		.51	.4	10	131	191	2383	171		fine. Has never left busi-
" 4	0		.24	0	8	130	190	2280	169		ness since first seen.
1918	0										
Mar. 1	0		.2	0	8	95	260	2716	167½		

last patient who died was a girl of 20 who developed a splendid tolerance but who was persuaded by Christian Scientists to give up her dietary restrictions. She died in coma one month after going on an unlimited diet.

This paper has laid stress on certain points necessary for the successful conduct of the fasting treatment for diabetes. Joslin's recent book must be studied, and certain laboratory tests must be learned. The importance of histories and complete physical examinations should be appreciated. It is necessary to vary treatment according to the case. Patients should learn the caloric value of foods and remain within their tolerance. Weight must usually be below normal. Self-denial and will power are essential for the patient. Habits and environment need regulation many times by the physician. The doctor finally, and most important of all, must know how to prevent and treat acidosis. The results reported, I hope will convince all that the fasting treatment should be given to all diabetics.

Book Reviews

Radio-Therapeutics. Being Part II of Radiography and Radio-Therapeutics. By Robert Knox, London. New York: Macmillan. 1918. Price, $6.50.

An excellent test on therapy by Roentgen or radium rays and the combination of these two agents. The conditions which are best suited to this means of treatment are specifically stated and the treatment for each condition is set forth in some detail.

The general as well as the local effect of radiations are emphasized, and the effects on normal as well as pathological tissues are briefly but plainly stated. The chapter on the dangers and the protection of the operator and the patient carries the significant statement "even when the greatest care is exercised as to dosage and frequency of application, it is inevitable that cases should occur in which in spite of all precautions, serious damage is done." Sarcomatous tissue has been found to be the most easily influenced by radiation, and carcinomatous tissues the least. The statement that tuberculous glands can rarely be made to disappear is not in accord with the experience of American workers who have had excellent results in the treatment of tubercular glands, particularly in children. The author believes that Roentgen rays offer better results in the treatment of exophthalmic goitre than either medicine or surgery. The chapter on the use of Roentgen rays in plastic surgery is of exceeding interest in this day of war surgery. By depilitating skin flaps, hair-bearing skin can be used to replace destroyed areas of skin about the face or even mucous membranes. The advantages of Roentgenotherapy before breast amputation are shown by the fact that the young cells of the carcinoma which may be disseminated during the operation, are easily killed by the rays. The chapters on the selection of types of tubes and apparatus will be of little interest to Americans, as the Coolidge tube has entirely supplanted other types and the interrupterless transformer is undoubtedly far ahead of the coil, which they still use in England, particularly for deep therapy.

On the whole, this book should prove to be a useful contribution to the Roentgen and radium literature. L. B.

Correspondence

FROM PRESIDENT BEVAN OF A. M. A.

Chicago, July 22, 1918.

Dr. C. Van Zwalenburg, President Medical Society of the State of California, Riverside, Cal.

My Dear Doctor Van Zwalenburg: The medical profession of the country is confronted at this time with the problem of organizing the profession for war. There are two specific things that must be done. We must furnish to the Government the necessary number of medical men for military service; this probably will be from thirty to forty thousand medical officers. At the same time, we must supply this required number of medical officers in such a way as to injure as little as possible our civilian communities through depriving them of necessary medical services. This carries

with it the obligation not to cripple scriously the medical schools nor our hospitals.

In order to meet these requirements it is necessary to use the organization of the medical profession in a systematic way. The most important agency that can be employed in this work is the American Medical Association, with its splendid organization of county and State branches and the efficient machinery which is possesses.

The Journal of the Association reaches the great majority of the medical practitioners of the country and it, together with the journals of the State medieal associations, provides a point of contact with practically the entire profession.

One of the facilities of the Association which could not be duplicated even by the Government itself, at unlimited expense, within any reasonable time, is the data from which is compiled the register of licensed physicians—the American Medical Directory. This is information concerning each licensed physician which has been gradually and systematically assembled, recorded and indexed in the course of years, at the headquarters of the Association.

These card indexes of this data concerning registered practitioners of medicine at the Association headquarters, is of great value. They made possible the "Survey" of the medical profession of the United States, which was published in The Journal for June 1, and which is, therefore, now at the disposal of each county and State organization. They can be utilized in conducting a campaign for providing future increments for the Medical Reserve Corps by making an individual study of the practitioners in each county, to determine the physicians who have gone into military service, ages of physicians, and other information which will assist in working out the problem.

The medical profession has responded more promptly to the call of the nation and has sent more of its membership into military service than any other profession, trade or business in the country. It was necessary that they should do this because the demand for medical men in war is larger than the demand made upon any other profession. The fact remains, however, that the profession has responded magnificently to the call to the colors. As the war continues and as the great military machine which is being built by the people of this country becomes greater and greater, it may become necessary to draft the medical profession up to 50 or 55 years of age, but this will not be done and should not be done unless the draft applies to all professions, to all trades, to men in all of the fields of human effort. It is probable, in fact it is almost certain, that the medical profession will be able to supply the necessary number of men by proper utilization of the organization and machinery of the American Medical Association and its component county and constituent State medical organizations without resort to draft.

With that end in view, I am writing to you and to all the presidents and secretaries of the constituent State medical associations and asking that the county medical societies of their State be organized for the purpose of accomplishing the following results:

1. To secure at least 20 per cent. of the registered practitioners of the State for the medical departments of the Army and Navy.

2. In securing these men, a careful survey of each county, each medical school and each hospital should be made. No locality and no institution unless it is clearly over supplied should be allowed to furnish more than 50 per cent. of its licensed practitioners; the Association will endeavor to cooperate with the medical departments of the Government in securing the necessary protection to communities, hospitals and medical schools.

3. Although it is desirable to secure at least 20 per cent. from each county, care should be taken to analyze the local conditions, the area of the county, the population of the county, the number of practitioners per capita in the county and as a general proposition, I suggest that at least one physician be retained at home for each 1200 or 1500 population.

As you know, the Surgeon General of the Army has recently called for 5000 men (see The Journal of the American Medical Association for April 13, 1918), and the Surgeon General of the Navy needs from 1000 to 2000 men. The plan which I am outlining to you will secure the number of men asked for to the present time. If it becomes necessary to call a larger number, it will of course be necessary to increase the percentage furnished by each State, possibly to 25 per cent., instead of the present 20 per cent. It will be desirable for you to organize your State so completely and thoroughly that if a further call comes from the Government, this can be promptly met.

As president of the American Medieal Association, I am asking you to use the machinery and organization of your State and county societies in the most efficient and earnest way for the definite, concrete purpose which I have outlined. It is clearly the duty of the American Medical Association and its organization and machinery in the fullest possible way to meet the requirements; we all welcome the assistance and co-operation of all associations and agencies that may prove of service in securing the desired results. In doing our part in the organization of the medical profession for war, we gladly place directly at the disposal of the medical department of the Army and Navy our entire organization and maehinery.

The American Medical Association is now preparing and will shortly make available to the secretaries of the State associations and of the county societies complete lists of the licensed physicians in the respective States and counties. On these lists symbols will be entered indicating the response which the physicians named have made to the call of the nation.

This work is in charge of the secretary of the American Medical Association who will communicate directly with the secretary of the State and, if desired, with the county organizations.

Yours very truly,
ARTHUR DEAN BEVAN, President.

Stanford-Polyclinic Colloquia

To the Editor: August 21, 1918.

It has been decided to continue the colloquia for physicians which were started at the San Francisco Hospital by the San Francisco Polyclinic, under the joint auspices of the Stanford University Medical School and the San Francisco Polyclinic.

It has been tentatively arranged that these colloquia shall take place every Thursday, on surgery and surgical specialties or gynecology and obstetrics, and on every Saturday on medicine and medical specialties at nine A. M. at the San Francisco Hospital; these to commence October 3, and to close December 21.

The following physicians will participate in conducting these colloquia: Of the San Francisco Polyclinic, Drs. H. A. L. Ryfkogel, T. G. Russell, A. J. Zobel, G. W. Hartmann; C. F. Welty, F. B. Carpenter, W. E. Stevens.

Of the Stanford University Medical School: Drs. Emmet Rixford, Leo Eloesser, J. R. Dillon, L. W. Ely, Rodric O'Connor, H. B. Graham, J. A. Sperry, H. W. Gibbons, H. P. Hill, P. H. Luttrell, W. F. Schaller, H. E. Alderson and H. H. Yerington.

The physicians of the bay counties are to be invited to attend these colloquia and it is proposed to make a nominal charge of $1.00 for those who wish to attend, to cover clerical expenses and postage.

Very sincerely yours,
W. OPHULS,
Dean Stanford University Medical School.

California League for the Conservation of Public Health

Whereas, The President of the United States has issued a proclamation to the effect that all public health activities are to be centralized in the Department of the Treasury and to be placed under the supervision of the Surgeon General of the United States Public Health Service; and

Whereas, the Assistant Surgeon General of the United States Public Health Service was selected by the Council for National Defense to act as Chairman of the National Committee of Medicine and Surgery, together with joint members or repsentatives from five interested governmental departments and the representatives of organized medicine, organized industrial medicine, organized labor and organized industries, the purpose of the committee to supervise and conserve the health and welfare of the civil population during wartime; and

Whereas, This committee, through the Department of the Treasury, has the necessary facilities and resources for the adequate and effective prosecution of the work entrusted to it; therefore, be it

Resolved, That the California League for the Conservation of Public Health pledge its fullest and enthusiastic support to the Government, to the Council for National Defense and the United States Public Health Service; and be it further

Resolved, That the California League for the Conservation of Public Health suggest that the Public Health Service or the National Committee on Medicine and Surgery, or both, immediately undertake a comprehensive investigation of the conditions of the health of the American civil population, with particular reference to the extent, nature and causes of prevailing sickness and the effective means which might be adopted, looking toward their prevention.

Whereas, The United States Government through the Children's Bureau of the Department of Labor, under the direction of Miss Julia Lathrop, is undertaking a nation-wide campaign looking toward the conservation of infant lives; and

Whereas, This League is organized for the purpose of conserving human lives, and the promotion of human welfare and happiness; therefore, be it

Resolved, That the California League for the Conservation of Public Health notify the Children's Bureau of the Department of Labor of the intents and purpose of this organization and its willingness and desire to co-operate in every way in the work which has been so splendidly begun by that body; and be it further

Resolved, That this League offer the Government at this time the service of its members, individually and collectively, to assist in the educational propaganda and individual service whenever requested.

Whereas, Malaria is prevalent in certain sections of the State of California; and

Whereas, Scientific methods are available to control the spread of this infectious disease; therefore, be it

Resolved, That the California League for the Conservation of Public Health offer the services of its organized membership to the California State Board of Health and other active agencies interested in the problem of malaria control to the end that this disease shall be placed on the list of those no longer prevalent in the State of California.

CALIFORNIA LEAGUE FOR THE CONSERVATION OF PUBLIC HEALTH.
H. N. Ryfkogel, Secretary.

State Society

ATTITUDE OF GUBERNATORIAL CANDIDATES ON SOCIAL HEALTH INSURANCE.

The various candidates for nomination for Governor on the different party tickets have declared themselves on the subject of Social Health Insurance as follows:

J. O. Hayes is unqualifiedly opposed to the proposed amendment.

Judge Walter Bordwell takes the same attitude, as do also candidates McGee of San Diego and Charles M. Fickert of San Francisco.

Governor Stephens in his first announcement of his platform favored the measure and has not subsequently declared himself upon it.

We are not advised of the attitude of candidates Francis J. Heney and District Attorney Woolwine of Los Angeles.

Mayor Rolph of San Francisco issued the following statement August 7:

"Since the publication of my platform I have learned that the plank relating to health insurance has caused a wrong impression to exist in the minds of many concerning the character of legislation which I will favor in the event of the adoption of the Senate Constitutional Amendment providing for health insurance. I believe it proper, therefore, at this time, to briefly state my views on this subject, not only for the benefit of the medical profession, who are deeply interested, but likewise for the information of the working men and women who and whose families will be vitally affected by any system of health insurance that may be adopted.

"While I have declared in favor of the amendment, I am not committed to any particular plan to carry it into effect if adopted by the people. I will strenuously oppose, however, any legislation which will tend to degrade the medical profession or impair the efficiency of its members, create an army of 'panel' or salaried doctors employed by the state, or render the insured workingman the unwilling patient of a state selected or controlled physician.

"Broadly speaking, I favor a system of health insurance which will furnish means to the workingman to enable him to support himself and family during unemployment caused by sickness, to employ his own physician, to meet the expenses incident to his illness, and to otherwise take care of himself and his dependents in his own way without the dictation of any officer, board, or commission, subject, of course, to such reasonable safeguards against imposition as may be deemed necessary."

At the last meeting of the Council of National Defense, Medical Section, the resignation of Dr. Harry M. Sherman was presented. Dr. Sherman has been Chairman of this committee and worked unceasingly in the interests of National Defense during the past year. He has now joined the colors and is stationed at Fort Rosecrans, San Diego County, Cal. Dr. T. W. Huntington was elected Chairman to fill his place.

The committee discussed the advisability of combining its interests with those of the State Council of National Defense. In order to co-ordinate the workings of the various committees on medical matters, and to prevent duplication of effort and to bring all the activities under one central control it was deemed advisable to place this committee under the supervision of the central State organization.

Resolutions were passed offering the State Council for National Defense the services and functions of this Medical Section. The Secretary was instructed to confer with Mr. C. C. Moore, Chairman of the State Committee. Amalgamation is now under way and bids fair to strengthen the work of the Medical Section and give it greater authority.

The Council elected the following men on the State Governing Board, Volunteer Medical Service Corps: Drs. H. P. Newman, San Diego; Stanley P. Black, Los Angeles; and George H. Aiken, Fresno; to take the place of Dr. Dudley Fulton, Los Angeles, and Dr. T. C. McCleave, of Oakland. Dr. Andrew Henderson, Sacramento, and Dr. J. Henry Barbat, San Francisco, are also on this committee.

The subject of the "Red Chevron" organization was discussed at length, and the committee, through a resolution, disapproves of this organization, preferring to lend its support to relief societies already in existence and of national importance.

The matter of enrollment was discussed and reports from various enrollment committees were read. It is apparent that very efficient work is being done in many county societies and that California is supplying its full quota of men in the service. The work of the Sacramento committee was particularly commended, and it was regularly moved and seconded that the form adopted by the Sacramento society be the standard form throughout the State. It is as follows:

AGREEMENT.

We, the undersigned physicians and surgeons practicing in Sacramento County, hereby agree to be bound by the following plan of induction into the service of the medical branch of the United States Army or Navy:

All physicians to be listed in the following groups:

1. Those fifty-five years of age and over, women physicians, and those disqualified by Army or Navy examining boards.

2. Those under fifty-five years of age.

All those in class one (1) will apply for membership in the Volunteer Medical Service Corps.

Class two (2) to be divided into the following classes:

Class 2 (a) Single men.

Class 2 (b) Married and without children

Class 2 (c) Married with children.

All those in class 2 to be subject to physical examination and enrollment into the Medical Reserve Corps on the following plan:

When the number of men required from Sacramento County proportionate to those wanted from the State of California, as indicated by the Medical Section of the Council of National Defense, is communicated to the Sacramento County Committee, we will apply for examination and enrollment into the Medical Reserve Corps in the following order:

First: Those in class 2 (a) in accordance to age, youngest first. When class 2 (a) is exhausted, those in class 2 (b) will apply in order of age, youngest first. When class 2 (b) is exhausted, class 2 (c) will be called in order of age, youngest first.

All questions as to whether any physician should apply for membership in the Medical Reserve Corps, on the Volunteer Medical Service Corps because of essential public need, or dependency, will be referred to the following committee: Dr. W. E. Briggs, Dr. E. L. Southworth, and Mr. Lester J. Hinsdale.

Nothing in this agreement will prevent any one signing it from applying for membership in the Officers' Reserve Corps or the Volunteer Medical Service Corps prior to his call for examination under the agreement.

Signed———————.

Date———————.

A report from each county was requested at the next meeting of the Council of National Defense. Secretaries will please take notice. The meeting was adjourned.

ONE HUNDRED AND FIFTH MEETING OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA, JULY 27, 1918.

The principal activities of this body were appointing committees as follows:

Committee on Scientific Work: Dr. Fitch C. E. Mattison, Los Angeles, appointed Chairman.

The committees on Public Health, Public Policy and Legislation were continued for the year 1918. The committees on Industrial Accident and Social Health Insurance were discontinued.

It was decided to hold the next meeting of the Council in Los Angeles in the month of October.

At the request of Dr. James H. Parkinson, his resignation was accepted, and Dr. J. W. James, of Sacramento, was appointed in his place.

The question of the "Red Chevron" organization was also considered, and it was regularly moved and seconded that the Council of the Medical Society of the State of California withhold its endorsement of the "Red Chevron."

Communications were read from the State Dental Association asking that a committee of six be appointed to confer with their organization on the subject of X-ray and the standing of radiographers. The Chairman appointed the following men to act: Dr. S. B. Soiland, Los Angeles; Dr. Geo. H. Kress, Los Angeles; Dr. H. P. Newman, San Diego; Dr. Lloyd Bryan, Dr. H. E. Alderson and Dr. Saxton Pope, of San Francisco.

The Legal Department made its quarterly report, which was placed on file.

It was moved and seconded that the Publicity Bureau was to make a study and appoint a committee of five to take up the matter of Industrial and Social Insurance and report to the Council at the next meeting.

County Societies

FRESNO COUNTY.

Dr. C. O. Mitchell, secretary of the Fresno County Medical Society, has been called to active military service and has gone to Camp Lewis, Wash. Capt. J. H. Pettis, Capt. W. M. Thorne and Lieut. F. L. R. Burks have gone to Camp Kearny, and Lieut. A. E. Skoonburg has received orders to report to Fort Riley, Kansas. Fresno County is doing her share in offering the services of medical men to the Army.

Dr. W. E. R. Schottstaedt, assistant secretary of the Fresno County Medical Society, will act as secretary during the absence of Dr. Mitchell.

LOS ANGELES COUNTY.

Dr. Howard W. Seager will rejoin Pershing in France. He has received his commission as captain in the Medical Corps. He served with General Pershing, who was then a lieutenant, in the Philippines. After graduation from Rush Medical College in 1896, Captain Seager enlisted with the Fifty-first Volunteer Iowa Infantry from Des Moines. February 4, 1899, during the Filipino insurrection, Seager commanded two ambulances, remaining on the firing line until the following October, going through the bath of fire in Bloody Lane with the Fourteenth Infantry Regulars. He served under Generals H. G. Otis, Hale, Wheaton, McArthur and Lawton when the latter was killed. He served as assistant surgeon, returned to the Philippines and served two years on the Island of Mindanao against the Moros. November 17, 1900, he reported for duty at Zamboanga, Minandao, to John J. Pershing, who was promoted from first lieutenant and assistant adjutant general to captain. Dr. Seager was on the board of health in Manila during the Asiatic cholera plague, 1902, and returned to Los Angeles as major and surgeon of the Seventh Infantry, California National Guard. When the war

broke out he was detailed to examine applicants for the officers' training camp.

Long Beach Physicians Win Commission.

United States Medical Reserve Corps commissions have been received by Dr. Amos T. Norman, captain; Drs. T. L. Rogers, E. R. Harvey, W. B. Hill and A. W. Buell, lieutenants.

Santa Ana Doctors to Kearny.

Dr. John Wehrly and Dr. H. N. Brothers have been called to the base hospital at Camp Kearny, August 1.

Five Pomona Surgeons Commissioned.

Examinations have been passed by Drs. J. K. Swindt, Robert L. Smith, H. W. Edgerton, F. C. Swcaringen and Ward L. Fisher. The first two as captains, the others as lieutenants.

Pacific Colony for the Feeble-minded.

Dr. George L. Wallace, founder of Wrentham, Mass., Institution for the Feeble-minded, acted as advisory expert and superintendent ex-officio of the Pacific Colony July 2. He said the high-grade moron is the most dangerous type to society. He is allowed all the privileges of society. Only experts in psychological analysis, who know how to recognize these people, can realize their danger to society. They should be under guardianship of the State. Dr. Wallace believes that even imbeciles may be taught some work with their hands and that no case is hopeless. Twenty-five thousand dollars was appropriated in 1917 for such an institution in California.

Captain Ellice McDonald of the Canadian Army Medical Corps and senior medical officer for the Pacific Coast of the British Canadian recruiting mission arrived in Los Angeles July 9 to advise the examining physicians as to the physical requirements of recruits for the British and Canadian armies.

Examination of Children is Proposed.

House-to-house canvass is planned to procure measurcments of all children under six years old. The City Council of Defense, the Board of Education and the Board of Health will co-operate with the National Children's Year movement.

County Hospital Fits Men for War.

The patriotic ward of the county hospital has removed defects from two hundred rejected men. Twenty-five men within a week have submitted to operations there in order that they may enter the United States Army or Navy.

Doctors Attend Soldiers' Dependents.

The civilian relief dcpartment of the Red Cross has extendcd aid to more than 1000 families of soldiers and sailors in the past year, according to announcement from headquarters. Two hundred and fifty medical cases have been handled by an ablc corps of physicians who volunteered their services.

123 Doctors Wanted for Red Cross Work.

Twenty-threc physicians who are general practitioners, twenty with experience in tubcrculosis work and eighty expericnced in work with children, is the need of the Amcrican Red Cross headquarters in Francc. Both men and women are wanted and the Red Cross will defray expenses and providc remuneration if necessary. Apply to the director, Tenth and Main streets, Los Angeles.

Long Beach Red Cross Building Dedicated.

On July 27, the Red Cross Society dedicated its new building at Third and American avenue. Governor William D. Stephens officiated.

Native Son is 100 Per Cent. Perfect.

Dr. J. M. Burnside, representing the United States Government, cxamined nearly 200 children under 6 years of age July 28 at the Selma Avenue School. John McArdle, 3½ years old, was found perfect. He is nearly 3 inches above the required height for his weight, which is 39½ pounds, his height being 38¼ inches. The work is in charge of the Children's Welfare Association of California, with headquarters in San Francisco.

Dr. Powers Pleads for Harbor Sanitation.

Dr. L. M. Powers, city health commissioner, urged better sanitary conditions at Los Angeles Harbor in speaking at the annual luncheon of the Joint Technical Societies of Engineers on July 23. Poor drainage and sewage systems, many buildings not "rat-proof" and the lack of regulation or zoning in the business district, were the chief reasons.

SAN DIEGO COUNTY.

Captain Thomas O. Burger, M. R. C., has been called from the Letterman General Hospital, San Francisco, to report for service at the base hospital, Camp Cody, Deming, N. M.

The medical officers at the naval training camp, Balboa Park, have developed a service in such a way as to give to each specialist largely the class of work for which he is peculiarly fitted, thus furnishing a diagnostic and service group of high standard of efficiency.

The San Diego profession takes pleasure in welcoming to their community Major Harry M. Sherman, M. R. C., who is now medical officer in charge at Fort Rosecrans, Point Loma.

The members of the county society, after a two months' vacation, are looking forward eagerly to the resumption of its scientific meetings in September. Many attractive scientific papers have been procured for the early meetings.

SOLANO COUNTY.

At the regular monthly mceting of the Solano County Medical Society the following officers were elected for the year:

Dr. Bernard Klotz, Vallejo, President; Dr. S. G. Bransford, Suisun, Vice-President; Dr. Alexander Doran, Secretary and Associate Editor.

A canvass of the medical men in and out of the Army and Navy shows that Solano County has contributed eight out of twenty-six, or almost one-third of its total strength. Others are planning to go. Fifty per cent. of the men in active practice bcfore thc war broke out will have gone before long.

Dr. Warren Corneil Jenny was elccted to membership.

Military News

1000 NEW NURSES NEEDED EACH WEEK.

Surgeon General Gorgas has called upon the American Red Cross, as the chief nurse-recruiting agency of the Army, to employ every possible means to increasc the enrollment of nurses for immediate assignment to duty. He asked that at least 1000 nurses a week be enrolled for the next two months.

The increase in the Army, both at home and abroad, has necessitated a proportionate incrcase in the number of nurses in the service. The Army to-day is growing faster than the nurse corps is increasing, and as the armies overseas enter the front-line trcnches in greater numbers the greater will be the need for nurses in the Army Nurse Corps.

Trained nurses who wish to be of service to their country can do so at once by going to the local office of the Red Cross and making application to join the Army Nursé Corps. If found satisfactory, they will be assigned to duty at once, either in thc base hospitals in this country or overseas.

Nurses enrolling in the Army Nurse Corps are members of the United States Army and work directly under officers of the Medical Department of the Army.

UNIFORM PHYSICAL STANDARD FOR ALL ARMY BRANCHES.

Uniform standards of physical examination governing the entrance to all branches of the armies of the United States for the use of all medical

officers of the Medical Department of the Army and of local and medical advisory boards under the selective service regulations have just been printed.

Adherence to the new rules and regulations by the local boards will, it is expected, result in uniform examinations in all parts of the country and should prevent men physically disqualified for military service from being sent to camps. At the same time the new standards will enable local physicians to make examinations with a better understanding of the needs of the Army and will clear away misconceptions and misunderstandings which will result in the sending of men to camps who heretofore were rejected.

The experience of the past year has enabled the medical authorities to establish standards of examination which will relieve the local boards of considerable doubts as to just what decisions to make in unusual cases. Enough of these cases have been examined to establish a policy in determining their military fitness.

Heretofore the physical standards of the three armies have differed and instances have been noted where men who have been rejected for service by the recruiting officers of the Regular Army have been accepted for military service by draft board physicians. Under the new standards this will not be possible unless the disqualifying defect be subsequently removed. The rule for all three armies is that to make a good soldier a man must be able to see well, have comparatively good hearing, his heart must be able to stand the stress of physical exertion, he must be intelligent enough to understand and execute military maneuvers, obey commands, and protect himself, and must be able to transport himself by walking as the exigencies of military life may demand.

The exceptions made to the foregoing general rule are in the case of the men accepted for special and limited service.

TRAINING COLLEGE STUDENTS FOR MEDICAL CORPS OFFICERS.

The Medical Department of the Army, through the National Research Council, will shortly issue an appeal to American colleges and universities urging them to alter their curriculum so that third and fourth year students may receive special training which will enable them to qualify as officers and for other work in the Medical Department.

The appeal will be sent to all the principal colleges and universities in the country, but as it is realized that important institutions may not for various reasons receive the appeal the request is made that all directing heads of such institutions write to either Dr. Richard M. Pearce, of the National Research Council, Washington, or to the Division of Laboratories, Office of the Surgeon General, Washington, for details of the proposed plan.

These colleges will render valuable assistance to the Government by offering these special courses to their students who will enter the Army when they become of age or in the event that they volunteer before that time. The students desired are those who are taking the various scientific courses. The course proposed by the Medical Department should appeal to men who are specializing in biology, zoology, plant pathology, and in industrial and agricultural bacteriology.

After completing such courses, arrangements for enlistment can be made through the Surgeon General's office if the applicant is under draft age, and, if of draft age, he can be inducted into the service and assigned where his special training will be of value.

This plan has already been tested in two colleges and the success attained has led the Medical Department to apply it to as many colleges as possible. From one such institution every man taking the modified course was admitted directly into the Army and went to one of the training schools, where a portion of them will later qualify for commissions in the Sanitary Corps. Others have qualified for positions at field or mobile laboratory units and as assistants in base and evacuation hospitals.

PREPAREDNESS LEAGUE OF AMERICAN DENTISTS.

One-half million operations free is the achievement of the Preparedness League of American Dentists, an organization comprising more than 15,000 dentists in the United States. They have pledged themselves to give at least one hour of their time daily, including materials, to men selected for the Army, Navy and Marine Corps. The half-million mark was reached early this month. The Preparedness League is under the direction of Director General Dr. Charles F. Ash, New York, and is being carried on with the approval and cooperation of the Provost Marshal General and the Surgeon Generals of the Army and the Navy. Dental colleges throughout the country are contributing their services, equipment and materials to help in the work.

According to the present law, only one dentist is allotted to every 1000 men in the Army. The League is supplementing this work of making recruits dentally fit, by making not only fillings and extractions, but by supplying thousands of crowns and bridges free of charge. In this way, many thousands of men, who had less than the minimum dental requirements to fit them for general military service, are able to be inducted into the service. It has been estimated that if the mouths of American soldiers be kept clean from diseased teeth, 20 per cent. of the men in hospitals because of dental infections will be available for service in the trenches, and the 20 per cent. of extra beds will be available for men wounded in war. Statistics from hospitals at the front show that 20 per cent. of the men in the sick wards are there because of diseases arising from infections from diseased teeth.

The League has estimated that on the basis of an eight-hour day, the average dentist of the organization gives 12 per cent. of his income to his country, plus his materials, besides the many civilian contributions which he makes to patriotic campaigns. Some dentists give two and three hours time daily. There are 48,664 dentists in the United States and the League is trying to obtain 100 per cent. membership at $1 a year. The only expense is for the distribution of literature and correspondence, which, it has been figured out, brings the cost of operation to an average of five cents an operation.

State Board of Medical Examiners

OPTOMETRY.

Harrison Act. Scope of practice of osteopathy.

"It is not within the province of the State Board of Medical Examiners to present legal opinions in connection with matters other than bear upon state affairs; however, I am pleased to submit to you data gathered from previous opinions rendered to this board on the question of the scope of practice of an osteopathic practitioner in this State.

"'Under the law no person is entitled to practice medicine or to be recognized by the officers of the law as a physician unless licensed as such by the State.'

"Ex parte Kinney, 84 Cal., 308.

"The present Medical Practice Act provides for the issuance of three forms of certificate:

"First, 'a certificate authorizing the holder thereof to use drugs, or what are known as medicinal preparations, in or upon human beings, and to sever or penetrate the tissues of human beings, and to use any and all other methods in the treatment of diseases, injuries, deformities, or other physical or mental conditions, which certificate shall be designated "physician and surgeon certifi-

cate"; second, a certificate authorizing the holder thereof to treat diseases, injuries, deformities, or other physical or mental conditions without the use of drugs or what are known as medicinal preparations, and without in any manner severing or penetrating any of the tissues of human beings except the severing of the umbilical cord, which certificate shall be designated "drugless practitioner certificate"; third, a certificate authorizing the holder thereof to practice chiropody.' (See section 8, chapter 354 of the Statutes of 1913, as amended by chapter 105 of Statutes of 1915.)

"I presume that you are not interested in the scope of practice of the chiropodists, and hence I will confine my consideration of this matter to the question of the scope of practice of the physician and surgeon, the drugless practitioner and the osteopath. It is plain from a reading of the last quotation that a drugless practitioner in this State is not permitted to use drugs. He is not referred to in the California statute as a physician, but is termed a drugless practitioner. A physician is one who prescribes medicine and is the individual who legally affixes the letters 'M.D.' to his name and practices with the use of drugs. It can be seen from the foregoing that a drugless practitioner in this State is not a physician and not entitled to the use of drugs.

"The question directly propounded in your communication refers to the scope of osteopathy. In 1901 the Legislature formally recognized osteopathy in the State of California by the passage of chapter 99 of the Statutes of 1901, which became a law under constitutional provision without the Governor's approval on March 9, 1901, and became effective on that date. Section 4 of said act provides in part as follows:

"'Having complied with the requirements of this act, said board shall grant a license to such applicants to practice osteopathy in the State of California.'

"Section 5 of said act provides as follows:

"'The certificate provided for in section 4 of this act shall not authorize the holder thereof to prescribe or use drugs nor to perform major surgery.'

"Section 9 of said act provides in part as follows:

"'A system, method or science of treating diseases of the human body, commonly known as osteopathy, is hereby declared not to be the practice of medicine and surgery.'

"The act of 1901 specifically prohibited the osteopaths from practicing with the use of drugs, and that being the only definition given either by the legislature or by the California courts on the scope of the practice of osteopathy, it defines the position taken by the Board of Medical Examiners of this State on the osteopathic licentiates granted certificates under the act of 1907.

"From the foregoing, it is my opinion that at no time in the history of the State of California has an osteopath been legally given the right to practice with the use of drugs. As noted in the first part of this communication, at the present time, an osteopathic certificate is not granted under the 1913 act and the drugless practitioner referred to in the 1913 act is specifically prohibited from using drugs."

Section 12, Chap. 354, Statutes of 1913.

Standard—army and navy. Acting assistant surgeon.

"Section 12 is simply an endorsement of the standard of medical requirements demanded before one honorably discharged from the United States Army or Navy may be admitted to practice in the State of California. Section 12 must be read in conjunction with section 13 which is the reciprocity clause of the Medical Practice Act and allows anyone to practce within the State of California whose diploma and license equal the standard of the State of California in a given year. Section 12 simply implies that the standard demanded by the United States Army and Navy is equal to the California standard.

"The applicant, as shown by the papers submitted to me, is an acting assistant surgeon in the United States Navy. Investigation has proven that an acting assistant surgeon is of equal rank with the same salary as the assistant surgeon of the United States Navy. The proof submitted shows that the medical examination given to the applicant was of equal merit with an examination given to an assistant surgeon.

"Section 12 of the medical act names therein as those entitled to a certificate to practice medicine and surgery within the State of California 'medical director, medical inspector, passed assistant surgeon, or assistant surgeon of the United States Navy.' The act fails to name 'surgeon.' The position of surgeon in the United States Navy is higher than that of assistant surgeon. Undoubtedly, if a surgeon should apply for a certificate he would be entitled to such, notwithstanding that 'surgeon' is not named in the act. Likewise an acting assistant surgeon is entitled to a certificate, or anyone occupying a position in the United States Navy of equal rank with assistant surgeon, provided that such applicant has taken an examination substantially the same as that given to an assistant surgeon. This seems to be the case in reference to the present applicant.

"Section 12 provides, however, that the applicant must be 'honorably discharged or temporarily detached or placed upon the retired list without being discharged from the medical department of the United States Navy.'"

Subdivision 10—Unprofessional Conduct.

Advertising the cure of venereal or sexual diseases.

"The particular words used in the advertisement were 'sexual debility'; but it can not be claimed that sexual debility is not synonymous with sexual weakness or sexual disorder. The advertisement refers to the use of '606' and the figures '606' are well known and their meaning well understood. Advertising the cure of venereal diseases may not be inherently immoral, but it is demoralizing and therefore within police power of the legislature. It is demoralizing to a child, too young to have the secrets of sex explained, to receive first knowledge of such matters through garish advertisements in the daily newspapers; it is demoralizing to the young boy to be led to believe that sex diseases are easily cured. It must be remembered that such advertised cures are not confined alone to the male, but alike to the female. Is it not demoralizing for a young girl to be led to believe that such diseases can be permanently cured by one or two visits to an advertising charlatan? It is demoralizing to the foreigner taking up his abode in this State to read in the papers that he may be cured of a dreaded blood disease by the injection of a worthless serum.

"The petitioner contends that the tenth subdivision of section 14 . . . is unconstitutional in that it prevents a duly licensed physician and surgeon from practicing his profession in such a manner as he deems best, and prevents him from advertising his name as a healer of diseases. Surely it can not be contended seriously that every physician may practice 'as he deems best'; the State has a right to regulate the practice of the healing art just the same as any other profession or business. If the State can not regulate the practice of medicine, then wherein lies the power to regulate the conduct of a business? A business man might sell obscene pictures to young girls because 'he might deem it best,' but the State certainly has the right to say that such action is in violation of the law. The subdivision does not prohibit petitioner from advertising as a healer of diseases but it prohibits him advertising the cure or treatment for venereal or sexual diseases or lost manhood, etc."

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn.....Dr. W. H. Walker, Willows
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin.....Dr. W. F. Jones, San Rafael
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa.....Dr. Robt. Crees, Napa
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. A. V. Doran, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI OCTOBER, 1918 Number 10

FOURTH LIBERTY LOAN.

The Fourth Liberty Loan campaign, which opens September 28 and closes October 19, provides a field for direct war work which no patriotic practitioner can shirk.

The size of the loan, certainly six billion dollars, probably eight billion, is huge. No sum approaching it in proportions has ever before been gathered for any purpose by any nation, nor at one time, by any group of nations. Until the Great War made the daily expenditure of hundreds of millions of dollars common, the mention of such a loan would have seemed the wildest fancy.

The enormous resources of the United States, estimated at $250,000,000,000, and the country's annual income, now said to approach $50,000,000,000, are sufficient guarantee that neither conscription nor confiscation of wealth or bank accounts will be necessary to raise the Fourth Liberty Loan or any others now in prospect.

Secretary McAdoo has stated officially that "the absurdity of any such fears is manifest and that any rumors to that effect are baseless." The Treasury Department, in publishing the Secretary's statement, adds succinctly:

"There is but one thing that will put in danger of confiscation the savings accounts of the American people. That one thing is a German victory."

The one thing needful to the raising of the six or eight billion dollars of the Fourth Liberty Loan in the short space of three weeks' time allotted to the task is the rousing of an irresistible determination in the heart of every man and woman of our population to make the loan an immediate and glorious success; a success as decisive as our immortal troops made in their initial charges of the war at Cantigny and Chateau Thierry.

The physician, being in daily and intimate touch with a great proportion of the population, has a great responsibility in this direction.

He should not consder it an incidental or lesser portion of his daily routine. He should consider it as vitally important as the surgeon regards the sterilization of his instruments.

The success of the Fourth Liberty Loan is the one big vital war effort which confronts civilian America. Without it ships cannot be built, soldiers cannot be fed, guns cannot be fed ammunition.

Its partial success would bring forth a chorus of jeers from the German press only comparable to gloating over a smashing defeat of our First American Army in its operations in Lorraine. Its failure would leave the German nation laughing in the faces of our soldiers and shrink the hearts of our allies.

A rousing oversubscription will shatter the German morale beyond power of Hun leaders to repair it. Germany has proved that she cannot be starved out. The defection of Russia released huge armies that the allies never expected to confront in the West.

We can only win the war by smashing the Boche back into Rhineland in terror-stricken rout.

The Fourth Liberty Loan will help do it.

Do YOUR share.

THE DENTAL INITIATIVE.

In another column of this issue will be found a discussion of the proposed dental initiative amendments which are to be presented to the voters of California on November 5th for adoption or rejection.

This measure is as vital to the medical fraternity as is any other question dealing with the health of the people, even though it applies only to

existing laws governing the practice of dentistry.

Three important facts are discussed. First, Is the great power of the initiative to be invoked and abused by any or every individual who is willing for personal greed to spend the money necessary to place a measure before the people? Second, Are the standards of dental practice to be lowered for similar reasons? And third, Are the people sufficiently well informed on matters pertaining to health and disease to amend the laws with which they are unfamiliar?

The power of the initiative was never intended to be used for selfish purposes or personal enrichment, but to enable the people to enact salutary laws for the public good, in the event a Legislature controlled by selfish interests might refuse to do its duty.

This measure, ostensibly proposed for the public good, yet publicly acknowledged to be for personal interest, bears little resemblance to good legislation, especially since personal publicity seems to be the most prominent feature of the issue proposed. The situation is too obvious for further discussion. It might be well to state, however, that in the event such a measure passes, it will require the use of the initiative at an enormous expense to the people to amend the dental laws in the future, and all public health and medical legislation is confronted with a similar problem.

As to the standards of dental education, no branch of medical science has been more widely discussed in medical literature and in medical practice during the last five years than dentistry.

When we realize how much danger is lurking in the mouth, the gateway to health, and that a liberal percentage of it is traceable to poor dentistry, it seems only fair to assume that higher standards in dental practice will be the only means of protection the public may have. The proposed measure offers nothing in the way of improving these conditions but on the contrary deprives the people of the only means of protection they now have.

As to the question of deciding on questions of health and disease by direct legislation, much can be said: Most people are wholly unfamiliar with these laws and ordinances. When they suffer from any physical disorder they immediately consult a physician, or a dentist or some other practitioner. This is an acknowledgment of the fact that they have no confidence in themselves in such matters. That sanitary laws and quarantine regulations are necessary is generally acknowledged to be true, and that these laws have been enacted at the suggestion of the medical profession and the public health authorities is very well known. This additional evidence corroborates the above statement.

The confidence which the general public reposes in the medical and dental profession warrants the assumption that the ethical members thereof are well enough informed on such matters to be able to advise the voters of the State on such issues and it should be considered a part of their duty to discuss public health just as much as individual health.

After thorough investigation, we are convinced that the introduction of such a vicious measure, at a time when a large percentage of the members of the dental profession have responded to the nation's call and are not here to defend their professional standards, will have a retaliatory effect upon its proponent. Physicians are most seriously concerned in this matter. They, and all citizens concerned over public health and efficient dentists and doctors, must see to it that Amendment 21 is overwhelmingly defeated. The reasons are clearly set forth in the article. Vote NO on Amendment 21.

FIFTY THOUSAND MEDICAL OFFICERS.

With an army of three million men in the field or in training and as contemplated, an expansion of this force to five million men, the Surgeon-General must have in the Medical Reserve Corps at least fifty thousand doctors. The Medical Corps must keep pace in growth with the army expansion and it behooves every doctor in the United States between the ages of 21 and 55, who is physically, morally and professionally fit, at the earliest possible moment, to arrange his personal affairs so as to offer his services to his country in the capacity of a medical officer. The United States is in the war to win and this can only be accomplished by a large and well-trained body of troops adequately cared for by sufficient number of medical officers. The importance of the doctor's service and its relation to the successful outcome of the war cannot be over-estimated.

As the mobile forces increase in size, so is there an expansion of Base Hospitals and other institutions for the care of the sick and wounded, and there must be no lack of officers, when required, to give them that professional attention which is so essential. It is well for the medical profession of the United States to realize at once that a Medical Reserve Corps of at least 50,000 doctors will be required to meet the demands of the Surgeon-General and upon which corps he can draw for his medical officers. By this time the profession must be fully alive to the needs of the service; so let every doctor who is qualified, feel that he is doing not only his patriotic duty in offering his service as a medical officer, but is relieving the tension of the Surgeon-General's office by placing at the command of the Chief Officer of the Medical Department an adequate force without the frequent beating of drums to supply the necessary number with each increase of the mobile forces.

If you have not already received an application blank for commission in the Medical Reserve Corps, your nearest Examining Board or the Editor of this journal will be glad to supply you.

VOLUNTEER MEDICAL SERVICE CORPS.

Many thousands of blanks for enrollment of the legally qualified men and women physicians of the country in the reorganized Volunteer Medical Service Corps are being mailed by the Chairman of the General Medical Board of the Council of National Defense. With the blank are enclosed a letter and a folder giving all details as to the organiization.

Under the reorganization, every legally qualified

physician, man or woman, holding the degree of Doctor of Medicine from a legally chartered medical school, who is not now attached to the Government service, and without reference to age or physical disability, may apply for membership and be admitted if qualified; whereas, the original organization admitted only those who for various reasons were ineligible to membership in the Medical Reserve Corps. The organization will mobilize the medical profession in order to provide for the health needs of the military forces and the civil population, and the recording and classifying of doctors will afford means of obtaining quickly men and women for any service required.

To date about 40,000 of the 144,116 doctors in the United States—not including the more than 5,000 women doctors—either are in Government service or have volunteered their services. Up to July 12 the Surgeon-General had recommended to the Adjutant-General 26,733 doctors for commissions in the Medical Reserve Corps. About 9,000 others who applied were rejected. With the 1,194 in the Medical Corps of the National Guard and 1,600 in the Navy, the total—38,527—constitutes 26.73 per cent. of the civilian doctors. Deducting those who declined their commissions or who have been discharged because of subsequent physical disability or other cause, the number actually commissioned in the Medical Reserve Corps stands (August 23) at 23,531 with several hundred recommended whose commissions are pending. Of the 23,531 there are 22,232 now on active duty.

The need of using wisely the service of the medical men, in view of the universal war activities, is indicated when it is known that in the five weeks ended August 2 there were 2,700 medical officers commissioned in the Army, Navy, and Public Health Service—or at the rate of 540 per week. It is estimated that at least 50,000 doctors will be necessary eventually for the Army. It can readily be seen that with the enrollment of these active men, their places in communities and institutions must be cared for, and the work, therefore, throughout the country must be so systematized and co-ordinated that the civilian population may not suffer. An important aspect is the need for medical men in the communities where munitions and other vital war products are being made.

The Volunteer Medical Service Corps will thoroughly care for these needs.

IMPORTANT CHANGE IN U. S. EMPLOYMENT CONDITIONS.

The supplying of war industries with common labor will be immediately centralized in the U. S. Employment Service of the Department of Labor, and all independent recruiting of common labor by manufacturers having a payroll of more than 100 men will be diverted to the U. S. Employment Service. This is in accordance with the decision of the War Labor Policies Board and approved by the President on June 17. (The War Labor Policies Board is composed of representatives of the War, Navy, and Agricultural Departments, the Shipping Board and the Emergency Fleet Corporation, the War Industries Board, and the Food, Fuel, and Railroad Administrations. Its chairman is Felix Frankfurter, Assistant to the Secretary of Labor.)

The above action was found necessary to overcome a perilous shortage of unskilled labor in war industries. This shortage was aggravated by an almost universal practice of labor stealing and poaching.

While the restrictions against the private employment of labor apply only to common labor at the present time, these restrictions will, as soon as possible, be extended to include skilled labor. In the meantime, recruiting of skilled labor for war production will be subject to federal regulations now being prepared.

This drastic change in the Nation's labor program has been found necessary in order to protect the employer and the employed, to conserve the labor supply of the communities and to cut down unnecessary and expensive labor turn-over (which, in some cases, is as high as 100 per cent a week), and to increase the production of essentials. While non-essential industries will be drawn upon to supply the necessary labor for war work, the withdrawal will be conducted on an equitable basis in order to protect the individual employer as much as possible.

A survey of the labor requirements is being made, and in order that each community may be fully protected, rulings have been issued that no labor shall be transported out of any community by the U. S. Employment Service without the approval of the State Director; nor shall any labor be removed by the Service from one state to another without the approval of the U. S. Employment Service at Washington. Every effort will be made to discourage any movements from community to community or state to state by any other service. Farm labor will be protected, for the industrial program distinctly includes special efforts to keep the farmer supplied with labor.

The requirement that unskilled labor must be recruited through the sole agency of the U. S. Employment Service does not at present apply in the following five cases: 1. Labor which is not directly or indirectly solicited; 2. Labor for the railroads; 3. Farm labor—to be recruited in accordance with existing arrangement with Department of Agriculture; 4. Labor for non-war work; 5. Labor for establishments whose maximum force does not exceed one hundred.

When the survey of labor requirements has been made and the aggregate demand for unskilled labor in war work is found, each state will be assigned a quota, representing the common labor to be drawn from among men engaged in non-essential industries in that state.

These state quotas will in turn be distributed among localities. Within each locality, employers in non-war work, including those who are only partially in war work, will be asked to distribute the local quotas from time to time amongst themselves. Quotas by localities and individuals are to be accepted as readily as they are for Liberty Loan and Red Cross campaigns. This plan of labor quotas is a protection for all communities. The object is to keep any community from being

drained of labor, and to use local supply, as far as possible, for local demand. The situation, however, is such that in certain cases some men may have to be transported over long distances.

This is probably the most drastic action that the Government has taken since putting the Army draft into effect. It involves a basic change in the Nation's labor methods, and is significant and important in the present rapid socialization of medical practice.

A NON-ESSENTIAL INDUSTRY.

A non-essential industry of the first magnitude is the manufacture and sale of nostrums and patent medicines. Consider the ingredients which go into their composition, for instance, the alcohol. Food will win the war. Why waste it? Consider the cargo space necessary for their transportation. Why waste it? Consider the army engaged in their production, transport and sale. Why keep them harnessed to a non-essential occupation when there is room in the Army and Navy? Consider finally, the host of users of patent medicines, the gullible host of self-druggers, whose ranks are recruited through credulity and blatant advertising. Seldom, indeed, but that they would profit by freedom from their favorite patent medicine tipple.

It would be well to tax patent medicines to the limit. With such a tax a sincere campaign by drug stores would go far to eliminate this pernicious American habit. Suppose the drug stores did lose money at first. Is that an argument for continued poisoning and swindling of the gullihle public? The doctors seem to fight for puhlic health and all it includes, often to their own monetary loss. Why should not the pharmaceutical profession take hold of this thing and oust it?

There is no disguising the fact that some doctors are a disgrace to the ethics and common practice of their profession in that they prescribe nostrums of secret composition. A determined campaign, however, among druggists and physicians would rapidly eliminate such reactionaries in both professions. It is greatly to he desired that patent medicines he ousted, and that the time and money now consumed in their provision and purchase, be diverted to direct war ends. True, as long as money is to he made, nostrums will be produced, and their elimination in this country will simply deluge less fortunate countries with their alcoholic and cure-all contents. Even now arrant fakes and discredited American patent medicines are being advertised and sold wholesale in China. But the civilizing process of popular education will follow them as surely as it may he slowly. For after all, this education in health, wholesomeness and real humanity is the dominating function and excuse for our own profession, and our own nation and our own race.

Says one drug house to its lay patrons, "We do not prescribe for your ills. That's your doctor's husiness. If you are really ill you cannot afford to take chances with the numerous so-called cure-alls, secret nostrums, or the new home prescription preparations which are largely advertised. Go to a reputable physician, and if you need any medicine, let him advise you." Would that each doctor would set his own house in order and then confer with his druggists on the suppression of this non-essential, wasteful, unpatriotic and dangerous habit.

DEMOCRACY VS. TIPS.

Scribner's Magazine declared as far back as 1887 that "This whole matter of tipping waiters, and of waiters expecting to be tipped, is a very marked manifestation of the poison of pauperism." A recent newspaper told of the death of a waiter who hequeathed $30,000. Query: Who is chief pauper, the giver or the recipient of a tip? Doubtless both. Persons and organizations have inveighed against tipping. Its evils have been heralded from the housetops. Its pernicious roots have been diligently excavated. His degrading tentacles have been execrated in song, story and resolution. Its infamous history will not be reviewed here nor will its notorious practice be the theme for condemnation or moralizing. All grant the evil of this ancient pest. All would have its abatement. Few are they who have the personal courage and manhood to stop it for themselves. The expression "manhood" is used with discrimination; for who associates this vice with "womanhood"? Have not we men something here, too, for study and learning?

Out of the great war have come certain good things. Others are dimly scanned in the misty future. As a war measure, alcohol is nearly eliminated. May the elimination he permanent! Equal suffrage has advanced mightily; fraternity, liberty, equality have become a ruling passion among men; venereal disease and prostitution are being attacked as never hefore in history; socialization of medicine is progressing by leaps; democracy is become a motive in the average man's breast. The war has furnished the stimulus, and the occasion—yes, even the excuse—for the accomplishment of many excellent and needed programs for human betterment. Why not, then, as a war measure, abolish tipping? What though it be one of our national and hest-loved vices? We admit its evil. We agree that it is incompatible with democracy. Why not make occasion of the war to root it out? We are tearing from us the vastly better entrenched liquor vice. Here is another of the cult of nuisances. Let's away with it.

Abolish tipping as a war measure? Certainly. Let it be widely understood that no man in uniform is expected or allowed to give a tip. Let waiters and hat check persons and all other parasitical exponents of the upward palm feel that they are un-American and disloyal to the great vibrant spirit of democracy, if they under any circumstances accept a tip from a man in uniform. That much we ought to do and enforce. Then who would be a tipper and thus prejudice equal service to the man in uniform? No tips expected from men in uniform and none given. That is at least a good start.

THE HEALTH OFFICER AND THE WAR.

It is said to take nine men working "over here" to keep one soldier fighting "over there." Clearly, therefore, it is wise to keep the nine workers husky and working as well as the one soldier.

Which health officer should stay at home and who should go to war? How is the nation bearing up under the war strain? What are the special war-time health menaces of the civil population, and what are we going to do about them? What headway are we making against the venereal diseases? These are the questions to be considered at the convention of United States and Canadian sanitarians at Chicago, October 14-17, to be held under the auspices of the American Public Health Association. Among the military sanitarians who will address the meetings are Surgeon-General Gorgas, Colonel Victor C. Vaughan, and Major William H. Welch of the Army Medical Corps. There will also be papers upon laboratory, industrial hygiene, vital statistics, food and drugs, sanitary engineering, sociological, and general health administration subjects. Other speakers at the general sessions will be George H. Vincent, president of the Rockefeller Foundation; Dr. Charles J. Hastings, president of the American Public Health Association; Dr. W. A. Evans, Assistant Surgeon-General Allan J. McLaughlin, U. S. P. H. S., Dr. Ernest S. Bishop, Dr. Lee K. Frankel, Dr. Frederick L. Hoffman and others.

As the health of the civil population has a direct bearing upon the winning of the war, mayors and governors are being requested to send their health officers to the conference in spite of the present high cost of government.

URGENT NEED FOR NURSES.

Surgeon-General Gorgas has called for 1,000 graduate nurses a week. Twenty-five thousand graduate nurses must be in war service by January 1—in the Army Nurse Corps, in the Navy Nurse Corps, in the U. S. Public Health Service, and in Red Cross war nursing. This involves withdrawal of many nurses from civilian practice and necessitates strict economy in the use of all who remain in their own communities. You can help get these nurses for our sick and wounded men by bringing this need to the attention of nurses. You can relieve nurses, where possible, wholly or in part from office duty. You can see to it that nurses are employed only in cases requiring skilled attendance. You can insist that nurses be released as soon as need for their professional service is ended. You can see that your patients use hospitals instead of monopolizing the entire time of a single nurse. You can encourage people to employ public health nurses. You can instruct women in the care of the sick. You can induce high school and college graduates to enter the Army School of Nursing or some other recognized training school for nurses. Encouraging nurses to go to the front involves real personal sacrifice and added work on the part of the physicians whose duty it is to maintain the health of our civilian second line defense. But the men who are fighting for their country in France need the nurses.

EDITORIAL COMMENT.

Secretary McAdoo has received the following cablegram from General Pershing:

"All ranks of the American Expeditionary Forces appreciate deeply the generous measure the Government has taken to provide insurance for their families, in proof of which more than 90 per cent. of men have taken out insurance. To wisely provision for their loved ones heartens our men and strengthens the bonds that unite the Army and people in our strong determination to triumph in our most righteous cause."

The Bureau of War-Risk Insurance up to June 28 has written $21,566,000,000 insurance, representing 2,570,455 applications. The average amount of insurance applied for is $8,387, and in some battalions and regiments, some in France and some here, every man has taken out insurance. In some units every man is insured for the maximum $10,000.

The *American Review of Tuberculosis* for July comments editorially on the safety first philosophy for the tuberculous. The man with arrested tuberculosis has to face, besides the popular stigma, the alternative of a life of idleness, in itself fraught with dangers of mental and physical deterioration, or venture along a risky path watching for symptoms of relapse, often too serious when once begun. There is only the middle ground for such a man which he must find for himself and be vigilant and well controlled. No test exists as yet to indicate the degree of healing of a tuberculous lesion. Many cases are discovered in persons in apparent good health and it would seem reasonable to consider that they have already demonstrated their physical fitness to continue their occupations. Such cases should receive an education and be allowed to continue in their usual vocations unless these are frankly hazardous. Intelligent caution is sufficient and until the attitude of the public is more reasonable and less hostile to the tuberculous, such instruction ought to be as free from publicity as possible. Much distress of mind may thus be prevented and the knowledge of, or the accidental discovery of, the disease will lose some of its dread significance to the hitherto unsuspecting individual.

NOTICE.

The Pulp and Paper section of the War Industries Board find it necessary to use every effort to conserve the paper supply and to reduce the consumption as much as possible. One of the requirements is that all publishers discontinue all free and exchange copies of their publications. The CALIFORNIA STATE JOURNAL OF MEDICINE is cooperating with the Board and is complying with this request, and we feel sure that this situation will be appreciated. If any of our readers to whom we have heretofore been sending free or exchange copies desire to receive our publication we will be pleased to place their names on our mailing list if they will send us $1.00 in advance, the price of subscription.

Special Article

THE DENTAL INITIATIVE.

By DEAN GUY S. MILLBERRY, University of California College of Dentistry, San Francisco.

At periodic intervals the people of our commonwealth are asked to decide, by ballot, questions of general and individual interest. Prior to 1910 these questions were presented in the legislative halls, referred to committees for consideration and public hearing and decided by the representatives of the people. Since 1910 we have reserved unto ourselves the right to enact legislation directly by means of the initiative, referendum and recall.

This method, found to possess a power which would yield a great good, has also been found to possess the means of promoting selfish individual interests for those who, if willing to spend the necessary money, may bring an issue before the people.

That the initiative was never intended for these latter purposes, no one will deny. That it is being used for such purposes is apparent in an analysis of the proposed dental initiative amendments and the arguments favoring their adoption.

The issue is known as Initiative Amendment No. 21 or the dental measure. A synopsis of the amendments together with an analysis of them follows.

The act is entitled "An act to insure the better education of dental surgeons and to regulate the practice of dentistry in the State of California," etc. The proposed amendments should be entitled "An act to destroy the present high standards demanded of the dental profession by the people, in order that the selfish interests proposing the amendments may be greatly enriched thereby."

The malice inspiring this measure is shown by the fact that the proponents waited until the dental profession was distracted by the war. Practically all of the recent graduates and many of the younger men within the first draft age limits in dentistry are in the service of the nation. The majority of the other members of the dental profession are giving freely of their time in rendering a much needed service to the recruits and drafted men gratuitiously. And this is the time selected to introduce this vicious measure.

The amendments are numbered Sections 17 to 20, inclusively.

Section 17 of the proposed measure provides for the creation of a Board of Dental Examiners of seven members, each of whom must have received from a recognized College or University a degree other than a dental degree, and that no member of the board shall hold office for more than four years within any six years.

It is presumed that, by this proposed change, a dentist with only a dental degree is incompetent as a member of the board to determine the fitness of candidates entering his own profession. If such be true the same regulation would hold in all professions. As a matter of fact the largest percentage of teachers in our dental schools possess only the dental degree, and American dental schools are generally acknowledged to be well recognized institutions throughout the world.

Familiarity with the duties and problems in vocational board service is necessary if the membership of such a board would render good service to the state, and the rigid or lax enforcement of health laws depends largely upon a knowledge of conditions gained by experience as board members.

We believe that the real motive of this section is to dispossess a Dental Board so thoroughly well informed on the tricks and subterfuges of the illegal practitioners and the charlatans that they dare not openly violate the law.

Section 18 provides that the Secretary of the State Board of Dental Examiners, upon application, shall issue a license *without examination* to any person who shall (1) pay a fee of twenty-five dollars; (2) show that he is of good moral character; (3) must be a graduate of a reputable dental college recognized by the National Board of Dental Faculties; (4) has been examined and licensed by a Board of Dental Examiners of any state of the United States; (5) has practiced under the laws of any state of the United States for a period of five years next preceding the filing of his application in this state.

This section is the real motive for presenting the measure, and the purpose is cleverly concealed under the plea that justice and equity is not meted out to dentists who would like to come to California from elsewhere and engage in practice.

To justify the statements that California demands good dental service and maintains high standards let me say that out of forty-seven dental colleges in the United States, of which only fourteen are Class A schools, there are two Class A and one Class B schools located in this state, and that California has more dentists in proportion to the population than any other state in the Union except Vermont and the District of Columbia.

If this measure becomes a law the standards of California will be reduced to the level of the lowest standards in the country and the requirements for admission to and graduation from our high grade dental colleges will be stultified, for persons may go to any other institution with lower standards and after practicing elsewhere for five years come to this state and practice without examination.

As a matter of fact if the initiative is passed we might just as well acknowledge that this state is incapable of setting up standard qualifications for the practice of dentistry, and that our universities and colleges are not qualified to establish and direct the courses of study necessary to educate the youth of the Pacific Coast in dental science. Our dental schools should close their doors and discontinue the work they have done for nearly forty

years in providing dental service for the people of this state.

The purpose of this section is to permit dentists to come here from elsewhere who can not pass a fair examination in order that the wholesale dental offices can secure more labor at probably less cost. This simply means the exploitation of labor.

The result will be that the incompetents and derelicts from elsewhere will flock to California and on demand will be admitted to practice. The public will not be protected, for the authorities now appointed by law to pass judgment on all dentists will not be allowed to determine the fitness of these individuals and they will be allowed to practice unconditionally. The public will have no recourse whatsoever if inefficient or incompetent dental service is rendered.

Statistics show that the migratory dentists are usually the incompetents, who because of their inability to establish and hold a practice in any community are continually seeking new fields; while the competent, well trained, modern, up-to-date dentist does not object to an examination in any state because he knows the people need such protection.

Further the measure demands that the graduates of our own high grade dental schools must pass an examination while those coming from other states after five years of questionable practice are not required to do so. There is no reciprocity established since the licensed dentists of this State can not go elsewhere and practice without examinations, while men may come here from elsewhere and do so.

The Surgeon General of the War Department at the present time is urging a plan whereby a method of national or reciprocal licensure will be established on a basis of standard qualifications. It would be folly in the face of such a proposal to enact a law now that would require an enabling act and initiative procedure to correct, in order to conform to the above plan.

Section 19 provides that any person shall be guilty of a misdemeanor and punishable therefor, who shall in the practice of dentistry administer any anesthetic except in the presence of an adult third person.

This is merely a slur on the dental profession. It does not protect the public against the dangers arising from carelessly administered anesthetics by incompetent persons, but it will add materially to the cost of dental service by requiring the presence of a nurse at all times, whether the occasion or the community needs demand it or not. It must not be construed that the dental profession is opposed to the presence of a nurse but that there is no need for such legislation and for making it a misdemeanor to operate without the presence of a third party.

Every dentist to protect himself against a violation of the law must employ a nurse who must be present at all times. Her absence through illness would prevent the dentist from rendering a humane service to his patient as it would also do in emergencies. The third person present except it be a member of the dentist's staff is often a source of responsibility diverting the attention of the operator from the patient at a critical time.

Section 20 provides that nothing in this act shall be construed to mean that it is unprofessional to advertise or that the charging of low fees for dental work shall be deemed unprofessional conduct.

This section shows the hypocritical character of the measure for there is nothing in the present law to prevent advertising and fees for professional service cannot be regulated by law.

All of the professions have for many decades refused to advertise their personal qualifications and attainments because such methods savored too much of egotism and conceit. There is no more reason why the dentist should advertise than should the lawyer or the carpenter.

Chester H. Rowell, one of the foremost editors of California, in commenting on this feature of the proposed measure has said: "This reference to advertising is designed as a bribe to newspapers to support the measure. It illustrates a contemptuous attitude of mind toward the newspapers on the part of the proponents of the measure and should be promptly resented by every self-respecting man in journalism."

In summarizing, the less one knows about ill-health or disease the more necessary it is that they be treated by well-trained physicians or dentists, for the uninformed are much more likely to be taken advantage of by the unskilled and unscrupulous, and thereby harmed both in body and in purse.

If initiative legislation can be enacted by a single individual through deception and misrepresentation for his own personal enrichment and to the detriment of the health of the state, then the status of all public health legislation is in great danger.

Should this measure pass it will become necessary to resort to the initiative and an enabling act procedure to modify the dental law in the future. Public health legislation faces the same problem if this passes.

The whole measure is vicious. It will, through pretense and deception, lower the standards of dental practice. It offers the alluring promise that dental service will be less expensive, an appealing but untruthful statement because fees for professional service cannot be regulated by law. It offers no protection to the people against incompetent and unscrupulous dentists for the laws are designed and enacted to protect the people and not the dental profession. It will add to the cost of dental service by making the employment of a nurse a necessity. It is proposed and financed by a single individual whose public philanthropies are as yet an unknown quantity, but whose personal interests appear to be the predominating purpose in this issue.

It is an effort to prostitute a great agency of the people, the initiative, and to degrade and besmirch an honorable profession for personal gain.

The intelligent electorate of California will vote an emphatic NO on Amendment 21.

DR. JOHN GALLWEY'S ARGUMENT AGAINST COMPULSORY HEALTH INSURANCE.

(From the San Francisco Examiner, September 15, 1918.)

The people of this State are called upon to decide at the polls on November 5 whether California shall change its Constitution and adopt Compulsory Health Insurance. This proposition will appear on the ballot as No. 20.

Like all members of the medical profession, questions affecting the public health demand my earnest consideration. After an impartial and painstaking examination of the alleged data and arguments offered by the Social Insurance Commission of California and a careful review of the history of compulsory insurance from its German origin to the present day, I have reached the firm conclusion that its adoption by Califorina would be a grave and costly mistake.

With all its enormous cost, Compulsory Health Insurance fails to produce practical results, but it inevitably demoralizes, cheapens and undermines the ethics and standards of our profession and hopelessly handicaps necessary research work.

As our profession is dedicated to the cause of public health, whatever jeopardizes our interests imperils the interests of the public proportionately.

The military genius of Germany evolved the scheme to make dependents more dependent.

My disapproval of Compulsory Health Insurance is not based upon the fact that it was "made in Germany." Its origin, coupled with its purposes and perverted ethics, however, make us more careful now in investigating this alien than we were in 1915, when Compulsory Health Insurance first appeared as an applicant for our state adoption.

CLAIMS COSTLY FAILURE.

Much strong evidence that it has not only been a disappointment but a costly failure in Germany might be adduced, although it served the temporary purposes of the military clique. To-day the American mind, however, regards German statistics with just suspicion—a nation that wantonly broke its most solemn pledges and ruthlessly violated sacred treaty obligations, contemptuously calling them "mere scraps of paper"—cannot be trusted to furnish other scraps of paper covered with laudatory statistics that may be relied upon.

I find it difficult to diagnose the specific kind of Compulsory Health Insurance with which our Social Insurance Commission wish to inoculate California, because the members of the commission refuse to give us a laboratory specimen. We do not require a laboratory test, however, to state definitely that all forms of Compulsory Health Insurance are dangerous in this climate and results would be generally fatal.

Even if a leopard is covered by a spotless robe, we still adhere to the belief that his spots are unchanged.

I believe we should be impressed by the uniform rejection of Compulsory Health Insurance by all the States that have considered it. If it has any substantial benefits to confer it would naturally be most welcome in the congested manufacturing centers of the East, where climatic, health, housing, living and wage conditions compare so unfavorably with California. The recent action of Massachusetts in repudiating this measure by a decisive vote is, therefore, especially significant. For California—the nation's health resort—heedlessly to become the first experimental state for Compulsory Health Insurance would indeed be an anomaly.

ADVISES DELAY.

There are so many of our able doctors at the front to-day, as well as keen observers from all walks of life, who now have exceptional opportunity for acquiring first hand valuable information on such doubtful vital subjects as Compulsory Health Insurance, that prudence suggests we refuse admittance to this alien applicant until our boys return from Berlin.

I am aware that the excessive zeal of the advocates of Compulsory Health Insurance has induced them to publish and proclaim this foreign measure as "imperative" for the success of our war program. As an extravagant statement for an extravagant measure, the commission's "war" statement is extremely unique.

But this is no time to engage in extravagant statements or experiments. All our time, talent and treasure should be exclusively devoted to winning the war. The increasing demands of our boys and allies make the practice of personal and public thrift our patriotic duty.

Such funds as we may have that are not required by the essential war activities should be devoted to a constructive policy for the conservation of public health, recommended by our foremost American health authorities—a policy based upon scientific facts, devoted to all the people, not to special classes.

WOULD NOT REDUCE SICKNESS.

More than sixty per cent. of disease is preventable.

The practical preventive policies proven by practice produce permanent results for the benefit of all. The ineffective sickness relief policy of Compulsory Health Insurance, whilst it would burden the many for the benefit of the few, would not remedy the destitute, reduce sickness or offer anything but palliatives.

And in exchange for a few palliatives, we are asked to adopt a Compulsory Health Insurance policy in California that would give a Social Insurance Commission arbitrary powers and make it superior and not accountable to courts, executive or people.

It would enable the functionaries of the commission, to which this vast power was granted, to pry into private homes, decide the state hospital to which the compulsory insured should be taken when sick and destroy the sacred confidential relations between physician and patient.

Many English doctors, impelled by the just objections of patients, are rebelling against the ruthless operation of the Compulsory Health Insurance Act requiring a description of private diseases to

be spread before the public eye upon the public records.

The vital defects of Compulsory Health Insurance are so apparent, and the need of it so invisible, and the objections to it so serious and the cost of it so enormous, that the only answer I can conscientiously give to the commission's question—"Shall we have Compulsory Health Insurance in California?"—is emphatically "No."

Original Articles

CEREBROSPINAL FLUID FINDINGS IN HERPES ZOSTER.*

By W. F. SCHALLER, M. D., San Francisco.

Herpes Zoster is divided into acute specific Herpes and symptomatic Herpes. The former classified and studied by Head and Campbell [1] and later experimentally by Rosenow and Oftedal [2] is claimed by these latter observers to be due to a streptococcus. It has for its characters that it is obtained from the tonsils, from the sputum, from pyorrheal cavities; that morphologically it is non-capsulated, stains positively by Gram, is short-chained and often lanceolate; that it produces moist green colonies on culture. In animals Rosenow and Oftedal produced typical Herpes lesions, both centrally and peripherally by intra-peritoneal and sub-cutaneous injections. The injection material included in addition to pure culture of the streptococcus, mixed cultures from the tonsils and pyorrheal cavities, and emulsions of tonsillar tissue. The posterior roots or ganglia corresponding to the Herpes area on the skin showed hemorrhages and edema. The hemorrhage at times extended for a short distance along the sheath of the spinal nerve, but intercostal nerves and cutaneous branches remote from the lesions in the ganglia and skin showed no changes. Streptococci in the clear blister fluid were absent. These primary mild lesions are probably trophic; the severer lesions are probably the result of a superimposed hematogenous infection. The streptococcus of Herpes Zoster has, then, an elective affinity for the ganglia and posterior roots. The skin lesions are probably at first trophic.

Symptomatic Herpes has been noted as a complication of a variety of different conditions, amongst which may be mentioned pressure cord paralysis as from tumor (Boas [3]), as an accompaniment of pneumonia; Pott's disease; poisons, such as arsenic; different forms of cord and meningeal disease; disease of the spine, such as carcinoma. Alderson [4] reports a case of Herpes in relation to a syphilitic cord lesion. Immerman [5] reports two cases of paresis and one of tabes showing Herpes, and concludes that the ganglion changes were in all probability specific due to spirochetes or their toxins.

Of the numerous theories of the causation of Herpes the lesions in the spinal ganglia and consequent trophic skin changes appear to be the most tenable. Of all those nervous disorders in which trophic changes occur from well-defined central lesions, such as tabes, syringo-myelia, as typical examples, Herpes has always appeared to me to be the purest example of a trophic nerve lesion. In tabes, for example, Barré [6] has held that the arthropathies are really due to vascular changes in the joints. Eloesser,[7] from animal experimentation, holds that the so-called trophic changes underlying Charcot joints are due to trauma and disturbance of the protective sensory mechanism of the extremities by reason of the sensory system degeneration. The frequency of syphilis in cases of syringo-myelia may also explain in a large measure the trophic changes secondary to vascular disease. Recently von Tschermak [8] has reported a case of gangrenous Herpes following a partial lesion of the brachial plexus affecting the ulnar nerve fibres, the eruption occurring after a period of 109 days after the injury. This writer regards this instance of Herpes to be a late angio-neurotic reflex. Similar cases have been previously reported by Charcot, Brown Sequard, Weir Mitchell et al. Orr and Rowe [9] believe Herpes to be an affection of the ganglia from an ascending process by way of the nerve lymphatics of the nerve sheaths. Montgomery and Culver [10] hold that the infection travels from the periphery, the door of entrance being the skin or mucous membranes. Accordingly Herpes is a centripetal disease. Thusly motor complications of Herpes and especially the frequency of these in cephalic cases are explained. Hewlett [11] states that the cause of motor paralysis accompanying Herpes is by no means clear. In two cases of cervical Herpes reported by this author and complicated by facial paralysis on the same side, the most plausible explanation appeared to be a descending process along the cervical nerves from the affected ganglia, and extension to the motor terminations of the facial nerve and an ascending process affecting the nerve trunk itself.

It seemed to me as far back as 1912 that one met with Herpes in syphilitic disease with uncommon frequency. The possibility of supposedly specific Herpes being in reality due at times to a latent syphilis was next thought of. Accordingly we endeavored to make cerebrospinal fluid examinations in all cases of Herpes which presented from that date. Of 79 cases of Herpes a lumbar puncture was done in 21 cases. In 14 cases in which a blood Wassermann alone was done four cases showed a positive reaction and 10 a negative reaction. The remaining 44 cases were not examined by the blood or fluid tests, nor were they clinically cases of syphilis.

The following brief abstracts of 21 cases in which the fluid was examined are here given. Only the routine tests for analysis of the fluid were made. There were no examinations for bacteria nor attempts at culture.

1. W. R. Dispensary No. 13197—12. Male, aged 38. Tabes. Dermatitis herpetiformis. Eruption on left buttock following salvarsan administration. Wassermann: blood negative, fluid positive. Leucocytes 88 per cmm. Globulin increased.

2. M. S. Dispensary No. 15742—13. Male, aged 41. Syphilis, Herpes Zoster. Eruption D_{12} L_1 L_2 L_3 right side. Wassermann: blood positive, fluid

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

negative. Leucocytes 100 per cmm. Globulin increased.

3. J. H. Dispensary No. 1466—11. Male, aged ?. Syphilis, Herpes Zoster. Eruption D_9 D_{10} right-sided. Wassermann: blood positive. Fluid Noguchi positive. Leucocytes not given. Protein increased.

4. B. D. W. Dispensary No. 9643—Male, aged 22. Herpes Zoster. Eruption D_{10} D_{11} left-sided. Wassermann: blood and fluid negative. Leucocytes 2 per cmm. Globulin not increased.

5. C. A. Private records (Relief Home). Male, aged 74. Herpes Zoster. Eruption D_{10} D_{11} D_{12} right-sided. Wassermann: blood positive, fluid positive. Leucocytes 10 per cmm. Globulin increased.

6. Incomplete record; history misplaced; data from card index. J. Male. Herpes Zoster. Cerebrospinal fluid findings. Globulins not increased. Leucocytes 2 per cmm. No record of Wassermann.

7. H. F. Dispensary No. 14915—13. Male, aged 58. Herpes Zoster. (History of chancre followed by specific treatment in 1887.) Eruption D_2 right-sided. Wassermann: no record. Leucocytes 14 per cmm. Globulins slightly increased.

8. C. P. Dispensary No. 23439—Male, aged 30. Herpes Zoster. Eruption C_6 C_7 left-sided. Wassermann: blood and fluid negative. Leucocytes 90 per cmm. Globulin slightly increased.

9. W. P. Dispensary No. 19913—Male, aged 60. Herpes Zoster. Eruption supra-orbital region right-sided. History of soft chancre 41 years ago, followed by specific internal treatment. Wassermann: blood and fluid negative. Leucocytes not increased. Globulin not increased.

10. N. S. Dispensary No. 48881—Male, aged 44. Cerebro-spinal syphilis. Herpes Zoster. Eruption fourth to ninth rib on right side of spine. Wassermann: blood negative. Fluid positive in amount of 0.5 ccm, negative 0.1 ccm. Leucocytes 73 per cmm. Globulin increased.

11. M. B. Dispensary No. 50418—Male, aged 56. Pulmonary tuberculosis, arthritis of spine, Herpes Zoster. Eruption, location not given. Wassermann: blood and fluid negative. Leucocytes not increased. Globulin not increased.

12. L. L. Dispensary No. 4757—Female, aged 8. Congenital lues, Herpes Zoster. Eruption left chest and back. Wassermann: blood positive. Fluid, no record. Leucocytes 63 per cmm. Globulin slight increase.

13. T. D. Dispensary No. 51332—Male, aged 54. General paresis, Herpes Zoster. Eruption D_6 left side. Wassermann: blood positive. Fluid positive. Leucocytes—three different fluids 55, 68, 70 per cmm. Globulin increased.

14. A. C. Dispensary No. 52713—Male, aged 41. General paresis, Herpes Zoster. Eruption on left shoulder. Wassermann: blood and fluid positive. Leucocytes 10 per cmm. Globulin increased.

15. A. J. Private Records 373—Male, aged 61. Pneumonia, Herpes Zoster. Eruption maxillary branch of 5th nerve. Wassermann: blood negative, fluid negative. Leucocytes 10 per cmm. Globulin negative.

16. A. P. Dispensary No. 44695—Male, aged 48. Herpes Zoster. Eruption lower intercostal nerves, left sided. Wassermann: blood negative, fluid negative. Leucocytes 6 per cmm. Globulin negative.

17. G. M. Dispensary No. 51918. Male, aged 11. Herpes Zoster. Eruption on posterior trunk. Exact distribution not given. Wassermann: blood and fluid negative. Leucocytes 2 per cmm. Globulin negative.

18. H. E. Dispensary No. 61775. Male, aged 76. Herpes Zoster, arteriosclerosis, hypertension. Eruption over 6-7-8 ribs right side. Wassermann: blood and fluid negative. Leucocytes 10 per cmm. Globulin negative.

19. B. B. Dispensary No. 59940. Female, aged 48. Syphilis, Herpes Zoster, chronic hypertension. Eruption left lower abdomen. Wassermann: blood positive, fluid negative. Leucocytes 1 per cmm. Globulin negative.

20. H. H. Private records (Relief Home). Male, aged 85. Herpes Zoster. Eruption left lumbar distribution. Wassermann: no record in blood and fluid. Leucocytes 14 per cmm. Globulin negative.

21. D. R. T. Private Records, No. 994. Male, aged 35. Herpes Zoster. Eruption inner border of right foot. Wassermann: blood and fluid negative. Leucocytes 15 per cmm. Globulin slightly increased.

Of the foregoing cases 9 occurred in syphilitic persons and in all but one of these (No. 19) the fluid showed a characteristic reaction of syphilis of the central nervous system. Eleven cases were negative for syphilis. However, in 5 out of these 11 cases there was a cellular increase above the normal—cases Nos. 8, 15, 18, 20, 21. The globulin test in these 5 cases was negative or slightly increased. One case (No. 7) we must class as doubtful as regards presence or absence of syphilis.

The following comment may be made from the foregoing analysis:

1. Herpes Zoster occurs with comparative frequency as symptomatic Herpes in syphilis of the central nervous system.

2. In non-syphilitic Herpes an increased cell count may mislead the clinician if other evidence suspicious for syphilis is brought out in the general survey of the case. As an example of this, I wish to mention more in detail the last case in my series. The patient, a physician, complained of pain in both lower extremities, which was suggestive of either the lancinating pains in tabes or an alcoholic neuritis. A blood Wassermann reaction revealed an xx-reaction. A searching neurological examination revealed, however, no sign of central nervous system syphilis. A lumbar puncture and fluid examination showed a negative Wassermann, reaction, globulin slightly increased and leucocytosis of 15 cells per cmm. Repetition of the blood Wassermann gave a negative reaction. Additional medical history in this case brought out the fact that a slight herpetic eruption had occurred about two weeks before the patient presented himself for examination. Even at this time evidence of the Herpes lesions were seen on the outer border of right foot.

Bibliography.

1. Head, Henry, and Campbell, H. W.: The Pathology of Herpes Zoster and its Bearing on Sensory Localization. Brain 1900, 23,353.
2. Rosenow, E. C., and Oftedal: The Etiology and Experimental Production of Herpes Zoster. Jour. Am. Med. Assn., 1915, 64, p. 1968; Journ. of Infectious Diseases, 1916, 18, p. 477.
3. Boas, Ernest P.: Jour. of Mental and Nervous Disease, 1917, 45, p. 531
4. Alderson, H. E.: Herpes Zoster in a Patient with Spinal Cord Syphilis. Jour. Cutan. Dis., 1914, xxxii, p. 230.
5. Immerman, Samuel L.: Herpes Zoster in Tabes Dorsalis and General Paralysis of the Insane. Jour. Am. Med. Assn., 1917, 22, p. 1607.
6. Barré, A.: Les Osteoarthropathies du Tabes, Thesis of Paris, 1912. G. Steinheil, Paris.
7. Eloesser, Leo: On the Nature of Neuropathic Affections of the Joints. Annals of Surgery, Aug., 1917.
8. v. Tschermak, A.: Archiv. fur. Dermatologie u. Syphilis. Berichtteil. Bd., cxii, Heft. 4, p. 337.
9. Orr and Rowe: Lymphogenous Infections of the Central Nervous System. Brain, 1914, 36.
10. Montgomery, Douglas W., and Culver, Geo. D.: Jour. Am. Med. Assn., lx, No. 22, 1692.
11. Hewlett, Albion W.: Motor Complications of Herpes Zoster. Calif. State Jour. Med., April, 1906.

IS PURGATION JUSTIFIABLE?

By PAUL CAMPICHE, M. D., San Francisco.

Dr. Alvarez has written several papers purporting to show that purging patients before surgical operations is the only cause of the peristaltic disturbance commonly known as "gas pains." He thinks the surgeons have been "striving for false ideals" and that they purge their patients in a perfunctory and unintelligent manner, *"ut aliquid fieri videatur,"* so to say, on account of superstition; without knowing what they are doing, without even being able to explain and justify the procedure. If this were so it would certainly reflect on the intelligence of the surgeons; therefore it seems proper that we should go into this subject with more detail.

The first remark to be made on Dr. Alvarez's papers is that the author fights against many things that exist solely in his imagination and not in reality. Surgeons abandoned excessive purging many years ago (see Kocher, Operative Surgery, 1907), and only an ignorant surgeon would physic his patient the evening before the operation so as to disturb his last night's sleep. Also, no sane surgeon administers physics to acute cases of appendicitis or Meckel's diverticulitis, acute peritonitis and the like. Therefore, any objection to their doing so was perfectly unnecessary and could have been omitted altogether.

But, coming to the subject proper, we think that Dr. Alvarez has weakened whatever is right in his contention by falling into a manifest exaggeration. He says, for instance, that no purgatives should be given because some purgatives are irritants and cause *dehydration*. To this the layman would answer that there are still some physics that empty the bowels gently, without causing any irritation or *dehydration* whatever, for instance, castor oil. Then why not use these?

The author seems unable to judge the relative importance of the various facts under consideration; he gives great prominence to observations that carry no weight and have no value as proof; and he deliberately ignores other facts that have the greatest importance and are the real crux of the whole problem. To illustrate this: he states that purging and ether alone have caused paralytic ileus in some cases. I have witnessed thousands of anesthesias and I have never come across anything of this sort, and most surgeons are of the same opinion. Why then give such prominence to, and attempt to use as decisive proof, a fact that is so very rare that everybody will doubt it?

But the main fault I find with Dr. Alvarez's work is the way that he has consistently ignored the factor that dominates this whole subject, and that we surgeons know is the real cause of gas pains: I mean the trauma we inflict on the peritoneum and abdominal organs in the course of our operations. I am surprised that Dr. Alvarez should give so little thought to this; and his experiments have certainly been conducted in a manner most unfair to the surgeon, and far remote and totally dissimilar from the conditions met in human surgery and pathology. He states that many laparotomies did very well without purgatives. I think that they would have done equally well after taking a mild physic. Simple abdominal operations do well and cause little pain when there is little pathology and little intra-abdominal manipulation; but they all have gas pains when the operation is long, difficult, and attended with much handling of the intestines. Therefore, if Dr. Alvarez wants to convince us he should pay more attention to human surgery and should try to reproduce the same conditions in animals. He should first perform a long and difficult operation—say a gastrectomy, resection of the intestines, hysterectomy or the like—on the animals, *and preferably in cases where tough adhesions had been created some months previously*: then a day or two after the operation he could study peristalsis, and if he should find it normal in such cases we would be ready to dispense with the use of purgatives.

Surgeons are always skeptical about experiments performed on healthy or on dead rabbits, and they maintain that what they have observed in hundreds of operations performed on human beings has also some experimental value, at least for the diseased human body. But if rabbit experiments are to prove anything at all, they should be conducted under conditions as nearly similar to human pathology as possible in order to allow fair and rational conclusions.

That a trauma of any kind inflicted on muscular tissue will impair its function, is well known and sufficiently established by the following instances: the paresis and relaxed condition of the anal sphincter for several days after its dilatation; the transitory bladder incontinence after confinement, when the urethral sphincter has been crushed against the pelvis by the child's head; the often very obstinate paresis of the descending colon after operation on the kidneys, etc. The most extreme example of this is seen in abdominal surgery, in the traumatic paralytic ileus. I saw such a case a few years ago; a young man in perfect health fell from a wagon and landed on his stomach, on hard ground; the next day there was much vomiting and distension of the abdomen. (By the way, the man had not been prepared by purging!) A laparotomy was performed; the whole intestine was found distended and paretic; there was no other lesion, no mechanical obstruction of any kind. The man died two days after the operation from paralytic ileus.

Every abdominal surgeon knows that the handling of the intestine, no matter how gentle, will be followed by some functional disturbance proportionate to the length of time, the severity of the procedure, etc. While this intestinal paresis may be trifling in a case of hernia, early (unexploded) appendix, or simple gastroenterostomy, etc., it becomes more and more pronounced in all the difficult cases where the intestine or rectum is adherent to pus tubes, an old diseased appendix with peritoneal adhesions, etc. That explains why an unprepared acute appendix case does so much better (regarding gas pains) than a well prepared interval one!

How does the surgeon explain "gas pains"? We think that a coil of intestine that has been

handled during the operation remains inactive ("paretic") for some time; the intestine above that point, being functionally normal, tries by healthy contractions to force its contents through the paralyzed segments. These contractions, by pulling and twisting the mesentery, cause what the layman calls gas pains. It seems logical to admit that a muscle recovering from a temporary paralysis will find it easier to make a little effort rather than a great one at first; this is why we believe that preliminary emptying of the bowels will make the work easier for the intestine recovering from paresis than if it has to forward heavy fecal masses. But this is of secondary importance; the main point is, that the long handling of the intestine, *the trauma,* is the main factor responsible for the partial intestinal paralysis and for the consequent gas pains, and that the preparation has little to do with it.

Now it is very kind of the physiologist to tell us to handle the tissues gently. (I thought the surgeon found this out first, years ago!) It is certainly an axiom for us to practice the "feather-like" dissections whenever we can do so. But this is not always possible in human surgery. You can do it in healthy men and animals; but in old peritoneal adhesions, when you have to dig two or three coils of small intestine away from the Douglas space, do the necessary repairs, stitch defects in the serosa, do an anastomosis, a resection, etc., as may be necessary, you will find in spite of all gentleness, that you have inflicted on the intestine a tremendous trauma of one and a half or two hours' duration; and these are the very cases which make so much trouble afterward, no matter how they have been prepared.

From the foregoing considerations we are forced to conclude that Dr. Alvarez has not proved his point, and this chiefly because he has ignored or overlooked the *corpus delicti,* which is the trauma done the intestinal muscles in every abdominal operation. This being so, and until experiments on this question are conducted in a manner duplicating the real conditions of human surgery, we feel at liberty to continue to purge our patients if there are other good reasons for doing so.

Far be it from us to give a physic before operation out of reverence for the teachings of the old humoral pathology (most surgeons nowadays hardly know of such a thing). Nor is it our remotest intention to interfere with the normal metabolism of our patients or to combat auto-intoxication. We know that it is most unsafe to venture into a ground that is not familiar to us. We purge our patients simply and solely to insure cleanliness and asepsis on the operating table; the surgeon does not want to be half sure, or nearly sure about this; he must be absolutely certain that the patient's bowels will not move on the operating table when the sphincters are relaxed, which is bound to cause infections, either by direct contact in operations around the rectum and pelvis and lower limbs, or indirectly by upsetting all the work of the nurses and the aids in the operating room.

We are told that the small bowel empties itself in nine hours and that the colon can be cleansed by enemas. These are fine *ex cathedra* statements, based on laboratory findings but ignoring the psychic element in man. In practical surgery we often have people who are very neglectful about regulating their bowels—laborers, miners, etc.; they tell us that their bowels move regularly, yet in emergency operations (without preparation) we find the cecum full of feces which, in cases of intestinal work, would certainly endanger the suture. In other patients who had taken a mild physic we have found the cecum still quite full at the time of operation, even in cases where enemas had been given. I have had cases where the operation was delayed half an hour or more because the patient could not return an enema given an hour previously. When this can happen under nervous excitement, why could not a similar disturbance in the emptying of the intestines take place the day before an operation? Enemas alone are not sufficient to insure perfect cleanliness in surgical operations. This is conclusively proved by many emergency cases prepared only by enemas, and in which feces escape through the relaxed sphincter, as is often seen during operations for perirectal abscesses, infiltration of urine, colpotomies, etc.

The Kocher school, to which I have the honor to belong, still continue to give a laxative before the operation. We give a mild physic, castor oil or a moderate dose of salts, *forty-eight hours* before the operation, in order to do away with the possible accumulation of feces that occurs in cases unknown to us. The day before the operation the patient has soft food and even a little bismuth. The night before he has only liquids; on the morning of the operation he is given a large enema, not so early as to disturb his sleep. This preparation, with mild purging forty-eight hours before the operation, while not conforming to new physiological discoveries, has worked very well for many years. It does not weaken the patients; does not disturb the peristalsis, and insures us against soiling the operating table. It is not done as a senseless routine *ut aliquid fieri videatur,* but as a matter of principle, to guard against anything that might endanger the asepsis. In short, we can say that in the last ten years surgeons have reduced purgation to the minimum compatible with safety to the asepsis.

Another point: We are told to feed patients as late as possible before an operation. How late? I have known nervous patients who, on the morning of the operation, vomited light food taken the night before.

We are told to feed patients early after operations; this also requires some explanation. I admit that they should not be starved for a whole week. But as long as gas pains, due to intestinal paresis, exist with the consequent reverse peristalsis, as indicated by distension, vomiting, or even only nausea, no attempt should be made to give anything by mouth, as this will only cause more vomiting, and no physiological experiment will prevail against the firm conviction, born of experience, of the surgeon on this point. Enemas are useful after operation because, in emptying the lower bowel of all

its contents, they make it easier for the paretic segment to recover and resume its activity gradually, without working against resistance.

As to the use of the Murphy drip, no physiologist should ever pass on this admirable method who has not himself operated on serious abdominal cases in man. As long as the intestinal paresis with nausea and vomiting persists, the Murphy drip should be continued; not only will the water be absorbed quickly in very large quantities (insuring a sufficient supply of water to the circulation) and without distress, but it will tide the patient over the dangerous period until the intestine returns to its normal activity.

The mild physic we give when the condition improves may not be so necessary; but to the surgeon's mind, after a serious abdominal operation, it is like the "proof" we make after adding long columns of figures. It shows that everything is certainly right. Besides, moving the bowels early after an abdominal operation is probably the best means at our disposal of preventing the formation of adhesions.

To sum up: The physiologist who deals solely with normal peristalsis in healthy rabbits, making an incursion into surgery, thinks that prevention is everything and that doing away with physics will bring the millennium in abdominal surgery. But the surgeon who, by the trauma of the abdominal operation, himself creates (necessarily and unavoidably) in every case more or less intestinal paresis due to the handling of the gut, no matter how gently, is interested chiefly in relieving the condition which exists, and which will always exist, more or less, as long as intestines remain involved in the pathology of the abdominal organs.

Avoid forcing food into patients who are still nauseated from their reverse peristalsis; avoid provoking vomiting, which can only lead to exhaustion and loss of liquids. Extensive use of the Murphy drip for thirty-six or forty-eight hours, or more if necessary, to insure an ample quantity of water to the circulation; enemas to empty the lower part of the bowel. These are well-tried means which no surgeon would like to miss.

In serious cases with threatening stercoraemia and exhaustion, protracted vomiting, etc., from paralytic ileus, an electric enema has often been a powerful stimulant to the paretic intestine and has saved many patients in especially desperate cases, which fortunately are rare.

References.

Alvarez: Calif. State Jour. of Med., July, 1918—"Cure and Prevention of Post-operative Gas Pains."
Alvarez: Surg. Gyn. & Obstet., June, 1918—"Is Purgation Justifiable?"

516 Sutter Street.

Remark. Since this article was written a paper by Dr. Emge appeared in the J. A. M. A. (Sept. 14, 1918), bringing some clinical facts in support of Dr. Alvarez's theory. This paper shows that a physic administered too late will cause a lot of discomfort to the patient. That is easily understood. The exaggerated peristalsis set up by the physic and the peristaltic disturbance (paresis) of the lower bowel caused by the operation are antagonistic and this is bound to cause much pain. The physic given too late intensifies the gas-pains. This does not prove that it is the cause of these pains. The only conclusion to be drawn from Dr. Emge's paper is: No purgative should ever be given the night before an operation. Those who make it a rule to give no physic later than 48 hours preceding the operation do not observe any gas-pains in ordinary cases.

PUBIOTOMY.*

By HENRY AUGUSTUS STEPHENSON, M. D.,
San Francisco.

From the Division of Obstetrics and Gynecology, Leland Stanford, Jr., University School of Medicine.

Cesarean Section because so technically simple has won such a high regard in the opinion of general surgeons, general practitioners, and even many specialists in obstetrics, that often more rational obstetrical operations are disregarded. Pubiotomy is one of these operations, and while it can not compete with Cesarean Section in a large field, in a small field it has much to recommend to those especially trained to manage abnormal obstetrical patients.

It is the purpose of this paper to point out that in at least three groups of cases pubiotomy is a more preferable operation than is Cesarean Section, to describe briefly the technique most often employed in performing the operation, and to give the prognosis for mother and child.

Before taking up the indications for the operation, it will perhaps be helpful to mention the contraindications. Since pubiotomy is always performed in the interest of the child, it should never be done when the baby is dead or in imminent danger. This last can often be determined by attention to the foetal heart rate. If this rate is below 100 or is markedly irregular, pubiotomy should not be done.

If the foetal heart be slow or irregular, it is wiser to attempt a high forceps and if unsuccessful, do a craniotomy as it is not justifiable to subject the mother to a bone-cutting operation to deliver a child which in the majority of cases would not survive the shock of the operation.

The second contraindication is furnished by contracted pelves in which the conjugata vera is 7 cm or less. In these cases, it would be impossible to deliver a normal sized child without seriously injuring the sacro-iliac joints.

Finally in those cases where infection is manifestly present, it is not wise to do the operation.

INDICATIONS.

Group one: There are certain cases where a slight disproportion between head and pelvis exists but where one might expect spontaneous labor to occur. This disproportion may be the result of a large head, showing no signs of hydramnios, with a pelvis which is normal. Or what is seen more often, the head is normal in size and the pelvis is somewhat smaller than normal.

Spontaneous labor occurs in about 75% of all such cases. In the remaining cases, even several hours of second stage pains with ruptured membranes fails to bring about sufficient descent of

---

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

the head into the pelvis and we are confronted with the choice of pubiotomy, high forceps or craniotomy. Cesarean Section at this stage is attended with such high mortality that it can scarcely be considered. When both mother and child are in good condition, pubiotomy becomes the preferable procedure. It is wise, however, to put the saw in place, then apply the forceps or do an internal podalic version, and if gentle traction does not bring the head into the pelvis, the bone should be cut through. After severing the bone, extraction of the child is easy.

ILLUSTRATIVE CASES, GROUP ONE.

Case 1. Mrs. H. O., No. 14269-13. Age 27 years. Gravida III, Para II.

Last Menstruation.—August 5, 1915, making expected date of confinement May 12, 1916.

Previous History.—Negative except for previous pregnancies and labors.

Previous Pregnancies.—Two uneventful.

Previous Labors.—First one March 1913. Duration 34 hours. Terminated by high forceps. Baby still born, weight 9½ pounds. Second one, July 1914. Duration 26 hours, terminated by version and extraction. Baby born alive but lived only a few minutes. Weight 9¼ pounds.

Recovery uneventful in both cases.

Present Pregnancy.—Uneventful.

Pelvic measurements:

Spines	24
Crests	25
Trochanters	31.5
Left Oblique	21.5
Right Oblique	20.
External Conjugate	19.5
Diagonal Conjugate	11
Bisischial	9½

Pelvis.—Flat.

It was decided to watch patient carefully and to induce labor before the baby became too large as there seemed to be slight disproportion between the head and pelvis. On May 9th, as patient showed no inclination to go into labor a bougie was introduced. A few pains resulted but patient did not go into active labor. Nine hours later, the cervix was about one-half dilated, with thin edges. Pains had ceased in spite of the administration of quinine (15 grs.) The disproportion did not seem great, so it was decided to complete the dilatation of the cervix manually and do a version and immediate extraction.

In view of the past obstetrical history it was deemed wise to lay a saw and if difficulty was experienced in the extraction to do a pubiotomy. This was done according to the method described later.

When the extraction was begun, it became evident that the child was larger than had been anticipated and it was difficult to get the thighs down. The pubiotomy was then done and a very easy extraction followed.

The upper wound was closed, a small drain placed in the lower wound and the patient's hips tightly strapped with adhesive. There was no communicating tear into the vagina. Catheterization showed clear urine. Baby weighed 10 lbs. and was 51 cm. long. Mother and baby left hospital on May 31, 1916, in excellent condition.

The only increase in size of the pelvis which was noted at the time of discharge was in the bisischial diameter, which measured 11.5 cm.

Case 2. Mrs. V. S., No. 19569. Age 31 years. Gravida VIII, Para VI.

Last Menstruation.—Some time in February, 1916, one month after last confinement, making expected date of confinement doubtful.

Previous History.—Negative except for previous labors.

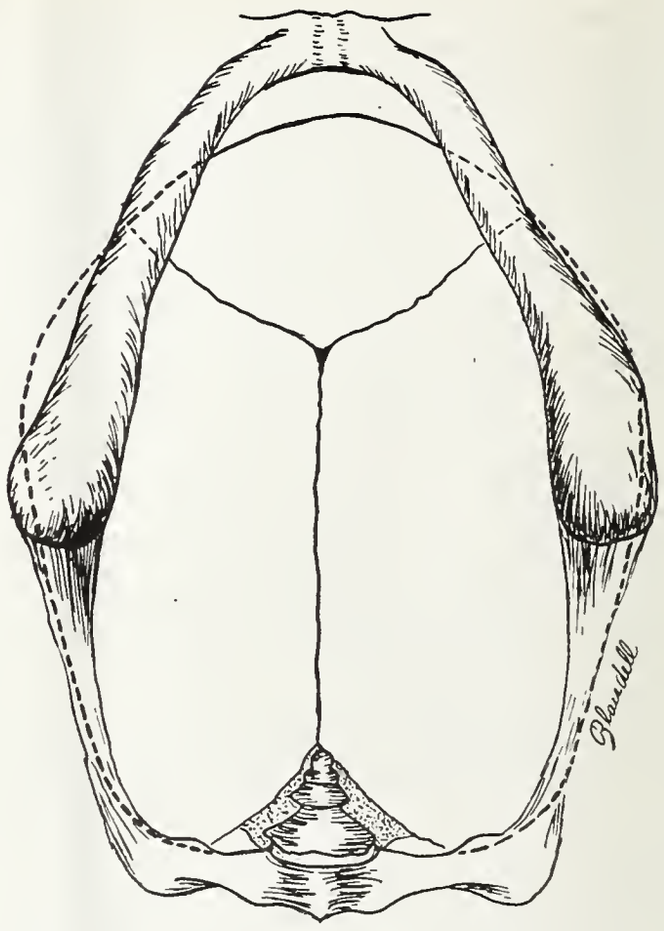


Fig. 1—Funnel Pelvis. Bischial diameter 7 cm. Post. Sagittal diameter 5 cm.

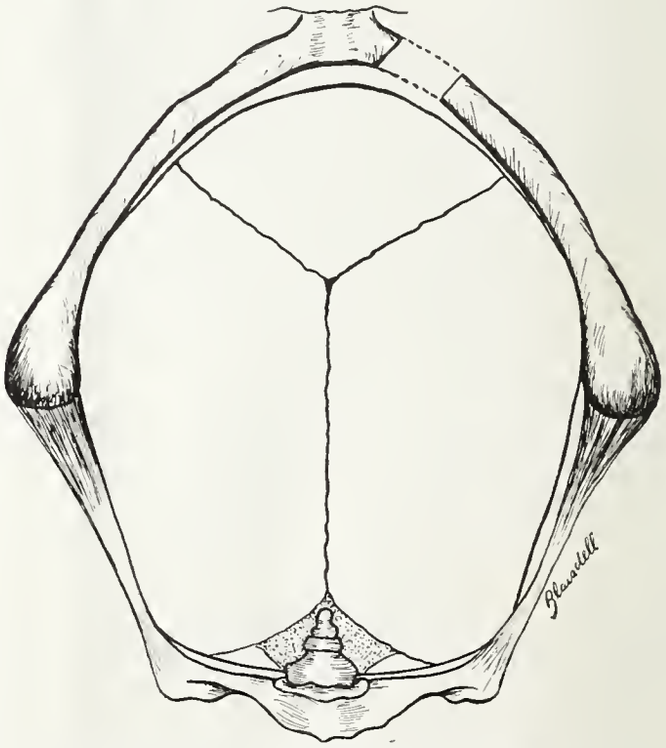


Fig. 2—Same as Fig. 1 after Pubiotomy. Bischial diameter 10 cm. Post. Sagittal diameter 5½ cm.

Previous Pregnancies.—Uneventful except for one spontaneous abortion 8 years ago.

Previous Labors.—Of the first four labors, three babies died at time of labor. The fifth baby was born in Lane Hospital in December, 1914, after an attempt at high forceps, by a very difficult version. Weight 8 2/16 lbs. Baby lived. The sixth baby was born in Lane Hospital in January, 1916, after long second stage, by version. Weight 10 lbs., length 56½ cm. Baby alive but suffered with Erb's

Palsy and a depressed fracture of left parietal bone.

Present Pregnancy.—Uneventful.

Pelvic measurements:

Spines	28
Crests	30
Trochanter	34
Right Oblique	24
Left Oblique	23½
External Conjugate	20
True Conjugate (estimated)	10
Bisischial	10

Pelvis—Flat.

Patient entered hospital April 5, 1917, in labor. Fundus measured 40 cm. above symphysis indicating very large child. Head not engaged. First stage of labor lasted 27 hours. After two hours of second stage pains and with ruptured membranes it was decided to terminate labor by Internal Podalic Version. A pubiotomy saw was placed as a prophylactic measure. Under anaesthesia the promontory was found to project forward at a sharp angle, the true conjugate was estimated at about 10 cm. After turning child it was found impossible to deliver the head and the pubis was severed. Baby born in good condition, weighed 8 13/16 lbs., length 53 cm. There were no lacerations. Mother and baby dismissed April 21, 1917, in good condition.

Group two: There is a second group of cases in which pubiotomy is usually the best possible procedure; namely, in those cases with funnel pelves. Here the bisischial diameter of the outlet measures 8 cm. or less.

Williams of Baltimore has called special attention to this group and finds that in his clinic the contraction occurs in about 8 per cent. of all women. The contraction may occur independently or be associated with a contraction of the superior strait as well. Spontaneous labor does not depend in the true funnel pelves on the bisischial diameter alone but also on the posterior sagittal diameter which is the distance from the mid point of the bisischial diameter to the tip of the sacrum. If this diameter be long enough, spontaneous labor may occur even when the bisischial diameter is as short as 5.5 cm. It has been shown that in this type of pelvis the enlargement following pubiotomy reaches its maximum and very often following the operation a normal pelvis results. This would be most desirable in young women, as a spontaneous outcome could be expected in future labors.

So far, there have been no pubiotomies performed in the Stanford Women's Clinic for this indication. Several patients with funnel pelves have been delivered by Cesarean Section at the onset of labor, some of whom might possibly have delivered themselves after a test of labor, while some patients have been delivered by forceps. In the future it is the intention to recommend to patients with funnel pelves that they submit to the passing of a saw prophylactically and to have pubiotomy done if necessary.

Group three: The third group of cases at times requiring pubiotomy are patients with breech presentations who have a slight disproportion between pelvis and head.

When the head presents at the superior strait one can usually determine with a fair degree of accuracy whether engagement and finally spontaneous labor will occur. When the child presents by the breech, however, this is not so simple a matter, and if external version can not be performed there is no way of knowing whether engagement can be effected even with an attempted breech extraction. When the pelvis is slightly contracted and the patient primiparous the matter becomes quite a deal more complicated and may result in a futile attempt to deliver a living child or in craniotomy on the aftercoming head. Confronted with the above situation one should wait for complete dilatation of the cervix, then prepare the patient for a breech extraction and pass a saw behind the pubis before attempting to extract. If the extraction then offers no great difficulty, the saw can be removed and the wound closed. If difficulty arises in the delivery the bone can be quickly severed and the child can be delivered safely. The saw should always be passed first, however, as one has not sufficient time to do so if the child has already been extracted as far as the head.

ILLUSTRATED CASE, GROUP THREE.

Mrs. A. W., private patient of Dr. A. B. Spalding. Age 24. Gravida 1, Para 0.

Last Menstruation.—August 7, 1915. Labor due May 14, 1917.

Previous History.—Negative.

Present Pregnancy.—Negative. Life felt Dec. 6, 1916, at the 17 2/7 week.

Pelvis normal.

Patient entered Lane Hospital May 18, 1917, in labor. The presentation was frank breech L.S.A. After 19 hours and 15 minutes, the cervix was fully dilated, membranes unruptured, frank breech still above brim. The membranes ruptured after 25 minutes of second stage pains. As the patient was very anxious for a live child she readily consented to have a pubiotomy saw passed prophylactically. The saw was passed, the perineum dilated manually, a partial internal podalic version was done and the patient allowed to deliver herself, which she did in 28 minutes. The saw was removed without sawing the bone and the incision closed, including a laceration of the perineum. The baby weighed 7 14/16 lbs. The mother and baby made an uneventful recovery.

In the clinic, so far, no patients in this group have been helped with a pubiotomy saw, and as a result several babies have died that could have been saved by this operation.

The technique usually followed in doing the operation is that described by Doederlein in 1904. After cleansing the patient thoroughly and emptying the bladder by catheter a small incision is made parallel to and slightly above the pubic bone. This is usually done on the left side but there is no particular advantage in this.

Care shoud be taken to cut down just medial to the pubic spine. If one goes too far laterally injury may be done to the large vessels (obturator and femoral) and also to the attachment of Poupart's ligament. Likewise one must not do a symphysiotomy, but keep far enough away from the symphysis to leave a small bony segment.

A special curved needle, resembling an aneurysm needle, is passed behind the bone and pushed through the labium majus. The saw is fastened to this, and the needle withdrawn, leaving the saw in position behind the bone. The bone can be sawed through with only a few movements. At

this stage a fair amount of hemorrhage occurs, controlled by pressure. The bone usually separates about 3 cm as soon as cut through. In order to protect the sacro-iliac joints, it is wise to have an assistant stand on either side and make pressure over the hips so the gaping does not exceed 6 cm. Forceps or version can then be accomplished.

Following the operation the bladder should again be catheterized to determine the presence of injury. The upper incision is closed by suture and a small drain is placed in the incision in the labium.

An adhesive strap about 4 inches wide should be put tightly around the hips holding the cut edges of the bone as nearly together as possible. The patient should then be placed on a Bradford frame to facilitate handling. After a few days the patient can be removed from the frame and usually is up and walking by the end of the third week.

The prognosis is good for both mother and child.

The mortality rate is not higher than 3 per cent. in cases done by experienced operators. Williams reports 43 cases without a death. Rongy reports 28 cases with one death, the patient dying of gangrene of the foot.

The largest number of cases have been reported by Schlafli, who collected from the literature 700 cases done by 142 operators. The maternal mortality was 9.6 and the foetal 4.8. The maternal mortality here is unquestionably high and can be attributed to the large number of operators.

A series of 319 cases done by well-recognized operators was reported in 1907 with maternal mortality of 1.88 per cent. and foetal of 4 per cent.

Of more interest, however, are the complications which may occur and which are considered as serious objections by those who are opposed to the operation.

First to be considered, are injuries to the bladder and urethra. If one is not careful to have the bladder empty before passing the needle and in cases of cystocele to hold the bladder away from the needle, it is easy to injure either bladder or urethra. I have seen two such injuries, one in which the needle was passed through both walls of the bladder, but the mistake was discovered before the saw was used. Fistulae did not develop and the bladder healed spontaneously. The second case had a small fistula which healed within three weeks. There was one fistula in Rongy's series.

Communicating tears are seen in about 20 per cent. of the cases. These should be immediately repaired, and in the cases seen while in Williams' Clinic, all did well.

Hemorrhage may be rather profuse when the bone is severed. This, however, is usually venous and can be controlled by pressure. If the bleeding is persistent the wound should be laid open and the bleeding vessel ligated.

Some of these cases have experienced slight difficulty in walking immediately after leaving the hospital. In none of the cases I have seen has this persisted more than two months. It has been extremely interesting to see how free from trouble these patients are, when we realize they have a movable segment of bone in their pelvis. This will be better appreciated from the X-Ray slides which will follow.

From the above then, it seems justifiable to conclude that:

1. Pubiotomy competes with Cesarean Section, only in a limited class of cases.
2. Pubiotomy is often indicated in:
   a. Moderately contracted pelves where test of labor fails to bring about spontaneous birth and when both mother and child are in good condition.
   b. Funnel pelves of pronounced degree especially in young women. The effect on the pelvis here is often such as to leave the outlet normal.
   3. Patients having large babies presenting by the breech, or with borderline pelves and a breech presentation where one can not be sure as to the presence of disproportion between head and pelves.
3. The prognosis is good for both mother and child, when the operation is done by experienced operators in well-equipped hospitals and in cases where both mother and child are in good condition.

Lane Hospital.

A CONTRIBUTION ON FOCAL RENAL INFECTIONS.*

By LEON JOSEPH ROTH, M. D., Los Angeles.

This report is based on six selected cases, all showing certain similar constitutional symptoms and wide variance regarding local manifestations and end results. The purpose of these histories is to demonstrate the uncertainty regarding the course of infection, pathological processes and terminology of a not uncommon condition. Bacilli of the colon type were found in five cases, but differed widely as to number, and it is very apparent that the severity of the actual bacillary infection is in no way parallel to the symptoms or to the local and general manifestations. A curious fact exists that no casts were demonstrable except in one case (Mrs. E. F. T.), and even then only a few hyaline and epithelial were found after a thorough search.

Case 1. Mrs. T. H., age 23. Patient seen in consultation only. Has recently recovered from a tonsillar infection and since has been having night sweats (about one week). Temperature 103 plus. No pain except during the period of frequent urinations. There exists a characteristic bacteriuria of colon type. General physical appearance very good. Except the tonsillar, has no other discoverable septic foci. Patient has been under a routine treatment. The urine cleared and her symptoms disappeared after about ten days when she returned to her home.

B. B., age 4. No definite history obtained on account of ignorance of parent. Child actually suffering from nasal and pharyngeal infection. Urinations frequent and painful. Rectal temperature 105. Urine gives characteristic swirl of bacteriuria and microscopically shows myriads of bacilli of colon type. No membrane in throat, no eruption on body; vulva inflamed. This child died about the seventh day of its illness.

Case 3. P. M., male, age 25. Has never been

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918 (Genito-Urinary Section).

ill or had any infection except gonorrhea six years ago, from which he fully recovered. A year after there developed a urethral burning without discharge, which recurred if patient drank hard or overworked, and was always accompanied by the passage of a fine gritty substance, which occasionally appeared in small masses at the end of urination. These masses were composed of pure cocci mixed with some undetermined inorganic substance.

Examination: Physical condition perfect. No genital pathology. Bladder negative except for few collections of white substance at fundus. Separate specimen of urine showed very numerous staph from both sides. Radiography negative. Following pelvic lavage and an autogenous vaccine, the urine became limpid, but was showered with fine particles which rapidly sunk to the bottom of graduate, and which microscopically showed the persistent cocci. The patient voluntarily discontinued treatment, being more interested in the urethral condition than the bacterial. This case does not properly belong in this group. It is included on account of the fact of having no recognized focus of infection, unusual infective bodies, no demonstrable pathology and no symptoms outside of the urethral burning.

Case 4. B. C., male, age 24. History of ordinary diseases of childhood. Has not been confined to bed for any illness for many years. No history of previous focal infection. Appears now with his first Neisserian infection of seven weeks' duration, and moderately severe reaction, including a left epididymo-orchitis, and a fairly severe prostatitis. He has had several attacks of moderate urethrorrhagia, which began about the fifth week of his infection. No pain had existed previous to this. There have been no chills or fever. Actually a persistent discharge exists, not great in the morning, but mostly during the day. Microscopic examination shows many pus cells and many intracellular diplococci. (Gram stain.) The urine is badly infected. Day urinations two or three; night urinations four to six. Has had pains recently in both renal regions, but these disappeared shortly after the ingestion of methyloids was discontinued. There existed a sub-chronic cystitis with granulations at fundus, the irritated mucosa showing tendency to exfoliation. The examination was rapidly made on account of clouding of the field by pus. Specimen of separate urines showed much pus and many gram negative intracellular diplococci. An intravenous injection of phthalein done at this time showed a very slow and very weak output, appearing in about ten minutes and in such minimum quantity that no estimate of percentage was made. There have been no casts and no albumen. The quantity of urine secreted was approximately normal and the specific gravity about 1014. A roentgenological examination revealed no evidence of stone or other pathology in the urinary tract.

Diagnosis: Bilateral Neisserian pyelitis or pyelonephritis and possibly ureteritis. Treatment: The kidney pelves have been irrigated three times, at weekly intervals with a 2 per cent. silver nitrate solution, and a pure Neisserian sero-bacterin administered in increasing doses, with the result that the patient's urine has cleared to normal.

Case 5. Mrs. B. N., age 28. Early history unimportant. Married three years ago. Less than two weeks after, and at time of first postmarital menstruation, developed dysuria, frequency and terminal haematuria. These symptoms lasted a few days and went into an indefinite and not clearly remembered sub-condition with pelvic pains following later. Otherwise there have been no illnesses. About three weeks ago there developed a severe tonsillitis, which kept patient in bed for several days. Had been fairly well for three days when dysuria, frequency, and terminal haematuria again appeared. Seven days ago pains developed in an insidious manner in the right renal region, which persisted, plus high temperature, into renal colic, and was accompanied by greater urinary discomfort and an increased amount of bleeding which was fairly copious, particularly during the painful crisis. (Mrs. E. F. T., No. 7.)

Examination: Temperature 104; great muscular rigidity on right side, plus severe pain. Cystoscopy showed normal bladder. Thorium injection showed ptosis of right kidney, but both pelves are normal; 10 cc. capacity on right, 13 cc. on left. Examination of separate specimen of urine and excretion of phthalein shows as follows:

Microscopical.

	Left.	Right.
Pus	None	Loaded
Blood	Many—Catheter trauma	Many
Bacteria	None—No T. B.	Few bacilli—No T. B.
Casts	None	None
Crystals		Many phosphates

Functional Tests.

Phthalein	Intravenous 1 c.c.			
Time appeared	13½ min. (reflex inhibition)		8 min.	
1st period	¼ hr.	% 9	¼ hr.	% 5
2nd period	¼ hr.	% 7½	¼ hr.	5
Total	½ hr.	16½%	½ hr.	
Polyuria	Water ℥VIII		No apparent result	

Note the paradox of the infected kidney excreting phthalein more rapidly but in much less quantity than its opposite. Her physician reports daily diminution of temperature following the examination with a drop to normal about a week later.

Diagnosis: Right infective pyelitis, possibly pyelonephritis. Treatment routine.

Case 6. Mrs. E. B. T., age 36. Early history unimportant. About twenty months ago had ten days' attack of grippe from which she fully recovered. Two months later had tonsillar abscess which was lanced. Following this and up to nine months ago was fairly well but not strong, and has had occasional chill and sweats. At this later date went to bed with the so-called grippe, and remained bed-fast until three weeks ago. It was at this time, January 27, 1917, that patient first noted mass in left side. Urinary frequency developed. Six and seven urinations both day and night. It developed that this frequency was only relative on account of the large amount of fluids ingested. The urinations were imperious in character, with burning during the act and with terminal spasms. No bleeding. The patient does not complain of pain, but only a fulness on left side and no polyuria following relief from this. Nausea is constant.

Examination: Patient very emaciated, weighs about 80 pounds; temperature as high as 104; large mass on left side, the lower pole of which is below the anterior spine of the ilium; upper border reaches the costal margin. Right kidney is normal in size, but descended so that it can be grasped between the fingers. Lungs normal. No T. B. demonstrable either in sputa or urine. Wassermann negative. Blood count: Reds 3,230,000, whites 13,360, polys 82%, lymphocytes 18%.

Cystoscopy. Bladder negative. Separate specimen obtained, and phthalein and pyelography done. The results of these examinations are as follows:

Urinalysis.

	Left (Pathological side)	Right.
Quantity	10 c.c.	12 c.c.

Microscopical.

Pus	Very few 1 or 2 to field H. d.	Rarely a W. B. C.
Blood	Few	
Bacteria	Very few	Very few
Casts	None	None
Crystals	None	None
Epith.	Many small	Few—small round and Squamous

Note rarity of pus cells on diseased (left) side.

Functional Tests.

Phthalein	1 c.c. Intravenous			
Time appeared	3½ min.		2½ min. (very active)	
1st period	15 min.	—7%	15 min.	—20%
2nd period	15 min.	—4	15 min.	— 8
Total	½ hr.	11%	½ hr.	28%
Polyuria	Two glassfuls water during examination. Right kidney more active—about 2 to 1 on left.			

A left nephrectomy was done on 7-18-17. No

complications encountered and the patient made a rapid recovery. Pathological comment. No tumor formation. Numerous pus filled abscesses.

Diagnosis: Left suppurative nephritis. Ptosis of right kidney with moderately tortuous ureter.

Case 7. Mrs. E. F. T., age 62. Early history indefinite. Three children previous to her 21st year, and a fourth when about 40. Health supposedly good during interim. Three years after birth of last child had pain on left side, for which was curetted; and following this during an attack of pain, discharged considerable pus and blood through vagina. Had recurrent attacks until menopause at fiftieth year. When 53 developed an infection supposed to be the grippe. During the persistence of temperature, she would spontaneously void a great deal of pus and blood in the urine and the attacks would then subside. The temperature was accompanied by great dryness of mouth and a urinous odor of the breath and dysuria. Repeated attacks of the same character occurred up to the time of consultation, except that the microscopic haematuria had ceased, but the pyuria persisted. When first seen was very weak and emaciated and running a high febrile course. During her examination, cystoscopy showed no bladder pathology except the ordinary senile changes. The results of urinalysis and phthalein tests are as follows:

Urinalysis.

	Left.	Right.
Urea	1.8	0.9
Microscopical.		
Pus	Many—10-15 per field	Many—15-20 per field
Blood	Very few	Very few
Bacteria	Few in clumps	Few in clumps
Casts	Few hyaline and epithelial	Few hyaline
Epith.		Many small cells
Functional Tests.		
Phthalein	1 c.c. intravenous	
Time appeared	8½ min.	10 min.
1st period	15 min. 13.0%	15 min. 7.5%
2nd period	15 min. 11.5	15 min. 10.0
Total	½ hr. 24.5%	17.5%

Remarks: The Phthalein test is high considering the fact of having had kidney pathology for over nine years. The pyelograms are interesting inasmuch as the patient has never complained of renal pain. Diagnosis, chronic pyelonephritis of infectious origin, plus deductions as to cause of hemorrhage and renal deformity. Treatment: No doubt the drainage of the kidney pelves have been productive of some benefit. Her physician has been using coli vaccine, a proper amount of induced polyuria, urotropin and hygiene with the result that at present the patient is in splendid condition without fever but with persistent pyuria of low grade.

811 Brockman Bldg.

THE PREVALENCE OF STREPTOCOCCAL INFECTIONS.*

By RACHEL L. ASH, M. D., San Francisco.

The purpose of this paper is to call attention to the prevalence of streptococcus in epidemic or sporadic form in our community, with septic sore throat as the original focus of infection and the involvement secondarily of other parts of the body, particularly the respiratory tract.

Streptococci were seen as early as 1866 by Rindfleisch in the pus formed during suppurative inflammations, but their pathogenic significance was first strongly emphasized in 1881 by the work of Ogston, who differentiated strepto- from staphylococci; by Fehleisen, who in 1883 isolated the streptococcus erysipelatus (hemolyticus); and by Rosenbach in 1884. The importance of the streptococcus outweighs all other disease producing organisms in their relation to human infection.

Owing to the variations in morphology, cultural characteristics and virulence, it has been exceedingly difficult to differentiate distinctly the various types. The first classification was based on morphological characteristics and pathogenicity (i. e., long or short chains, capsules, etc.) but later investigations have proved that classification based on biological characteristics are more reliable in determining type, because of the influence which environment has on morphology.

The classification of Schottmüller is the most practical for clinical purposes. He classified streptococci into three great groups: (1) Streptococcus pyogenes or erysipelatus, which shows hemolysis on blood agar plates; (2) Streptococcus viridans or mitior, which produces a green halo about the colonies on blood agar plates; and (3) Streptococcus mucosus, which produces a dark green zone around colonies on this medium. Streptococcus mucosus, about whose classification there has been, and still is, considerable discussion, is probably identical with pneumococcus Type III of the now well known classification of the Rockefeller Institute. Here the gram positive diplococci causing pneumonia are arranged according to their immunological characteristics into four types: Types I and II are invariably pathogenic, Types III and IV are commonly saphrocytic, sometimes pathogenic.

Epidemics of sore throat were reported as early as 1875 in South Kensington, England, and between 1880 and 1905 there were ten epidemics reported which were fulminating in character. The first epidemic of sore throat studied in America was that of 1911 in Eastern Massachusetts by Winslow. Here the records of over 1500 cases were collected, from 1100 to 1200 of which were in the immediate region of Boston. During the same period in a district some 20 miles distant about 392 cases occurred. Since this time there have been a number of epidemics, notably in Chicago, Boston, Baltimore, New Hampshire, Vermont and New York, and milk as a casual factor has been almost overwhelming in all these cases.

In nearly all these epidemics of septic sore throat the streptococcus was the dominant organism; there were frequent complications or sequellae such as false membrane, otitis media with enlarged cervical glands, arthritis, erysipelas, nephritis and endocarditis. The epidemics spread to various members of a household, school or institution either by direct contact or by means of infected milk.

It is impossible to classify absolutely the clinical complications of septic sore throat from the type of streptococcus involved. The streptococcus hemolyticus of Schottmüller produces angina and erysipelas and as complications lymphangitis, pleuritis and peritonitis. The streptococcus viridans is the most prominent type in the production of endocarditis lenta. Streptococcal infections are spread by direct invasion from the original focus or by the blood or the lymph stream into distant organs. The relation of the streptococcus to infections of the lower

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

respiratory tract, enteritis and puerpural septicemia is well known. In an epidemic of sore throat in Helsingsfors in 1904 in which 2003 cases were studied there were sequellae of erysipelas, otitis media, peritonitis, empyema, mastoid, processes of the antrum of Highmore in the epiglottis region, laryngitis, bronchitis, pneumonia, polyarthritis, acute nephritis, hemorrhagica, oophoritis, neuritis, scarlet fever and infections of the nose and pharynx and adjacent sinuses.

CASE REPORTS.

Case 1. In the Fall of 1916 an epidemic of sore throat occurred in an institution of 200 children in which 30 children were affected. A girl of 16 years, who had never been previously ill, had both strepto- and pneumococci in her throat culture. Though the temperature did not vary between 101° and 103° and the respirations between 36 and 48, her condition soon became alarming. Physical findings were not very well marked. On the fifth day a dullness was noted about two inches in diameter at the angle of the right scapula. An immediate exploratory puncture revealed pus with streptococci in chains of varying length. The left lung showed nothing unusual. Thoracotomy was at once made and the chest was emptied of a liter of yellowish green pus. Her condition did not improve and the following day dullness with bronchial breathing in similar position in the other lung appeared. Another exploratory puncture revealed more fluid with streptococci. Sudden death followed the aspiration.

Case 2. Three weeks later a girl of 14 years entered the Children's Hospital with an illness of five days' duration. Six weeks previously there had been a tonsillectomy. Now there were multiple joint infections and infectious nephritis, pericarditis, patches of pneumonia; streptococcal pus was found in the pleura and streptococci in the blood stream. Her death occurred in the sixth day.

Case 3. In December 1917 another case in a woman of 28 years presented practically the same physical findings as Case 1. After a peritonsillar abscess there appeared the same low temperature and double empyema. The pleural fluid was a blood tinged pus present in enormous quantities Streptococcus viridans was isolated in pure culture. Death occurred ten days from the beginning of her illness.

Case 4. Three days later a child of 2½ years at the Children's Hospital presented a purulent pleural exudate appearing within 48 hours after the onset of a definite pneumonia. The fluid was aspirated, thoracotomy was performed and streptococcus viridans was found. Anti-streptococcus serum was given and the child is now on the road to recovery after a protracted illness.

Case 5. In January of this year another mild epidemic of sore throat occurred in an institution in the course of which an 18-year-old girl developed a broncho-pneumonia and erysipelas subsequent to a severe tonsillitis.

These cases all occurring in groups within a short period suggested the probability of streptococcus in epidemic form in our community. Since January 15, 1918, I have studied all pneumonias and sore throats in the Pediatric Service of the University of California Hospital, and from other available sources, to determine the prevalence of streptococcus, the type, the clinical findings and virulence. The bacteriological work was done under the supervision of Dr. K. F. Meyer of the Hooper Foundation. In all twenty cases were investigated. The findings are presented in the accompanying table.

The majority of the patients had pneumonia on entrance. In the eighteen cases of infections of the lower respiratory tract (pneumonia, empyema, etc.) fourteen were due to some type of streptococcus. In all of the fourteen cases of primary tonsillitis streptococci were found, in five of which were present this questionable streptococcus mucosus, the others being streptococcus viridans. Some of the cases are especially interesting from the standpoint of contact infection. One, a boy with a lung abscess, secondary to pneumonia produced by the inhalation of a nutshell, showed streptococcus viridans as the prevailing organism in the expectorated pus. About a week later his brother, who had been sharing the same bed, was brought to the Hospital with a streptococcus viridans pneumonia. During my examination of a child with a streptococcus mucosus angina, he coughed into my face. As a result, a tonsillitis and otitis media due to the same organism developed while the nurse in charge of this patient came down with a peritonsillar abscess also due to streptococcus mucosus.

CONCLUSION.

There is no question as to the pathogenicity of the streptococcus and, from a public health standpoint, throat cultures should be examined in severe and questionable cases not only for diphtheria but for streptococcus as well. Streptococcus sore throat

No.	Name	Age	Original Infection	Predominating Condition	End Results	Organism
1	M. P.	Infant	Tonsillitis	Lobar Pneumonia	Recovered	Streptococcus Viridans
2	M. G.	"	"	Broncho Pneumonia Otitis Media	Died	" "
3	E. C.	Child	Pneumonia	Pulmonary Abscess	Recovered	" "
4	J. C.	"	Bronchitis	Lobar Pneumonia	"	" "
5	B. C.	Infant	"	"	Died	Pneumococcus Type IV
6	F. D.	Child	Tonsillitis	Endocarditis Pneumonia	Improved	Streptococcus Mucosus
7	G. H.	"	"	Pneumonia	Recovered	" "
8	D. S.	"	"	Endocarditis	Improved	" "
9	A. P.	Infant	"	Lobar Pneumonia	Recovered	Pneumococcus Type IV
10	F. O.	"	"	Broncho Pneumonia	"	Streptococcus Viridans
11	B. O.	"	Bronchitis	Broncho Pneumonia	"	Pneumococcus Type IV
12	C. M.	"	"	Lobar Pneumonia	"	" "
13	R. A.	Adult	Tonsillitis	Otitis Media	"	Streptococcus Mucosus
14	C. H. P.	"	"	Peritonsillar Abscess	Recovered	" "
15	C. H. L.	"	"	Broncho Pneumonia	Improved	Streptococcus Viridans
16	C. H. C.	"	Peritonsillar Abscess	Pneumonia Empyema	Died	" "
17	C. H. Z.	Child	Tonsillitis	Lobar Pneumonia	Recovered	" "
18	C. H. L.	Infant	Lobar Pneumonia	Empyema	"	" "
19	C. H. R.	"	Tonsillitis	Peritonsillar Abscess	Died	" "
20	G. H. L.	"	Lobar Pneumonia	Lobar Pneumonia Enteritis	Recovered	" "

is a reportable disease in New York and has been since 1914. Nurses and other attendants, members of a household, etc., should use all possible precautions to prevent spreading the infection. On reading the medical history of our cantonments and the number of serious streptococcal infections occurring either as sequellae of measles and other contagious diseases or as primary infections one is impressed by the virulence of these bacteria. The methods of investigation at the present time available are by no means as complicated as other routine procedures, the Wassermann reactions for example, and undoubtedly still simpler methods will be evolved as demands for investigation are made upon local boards of health.

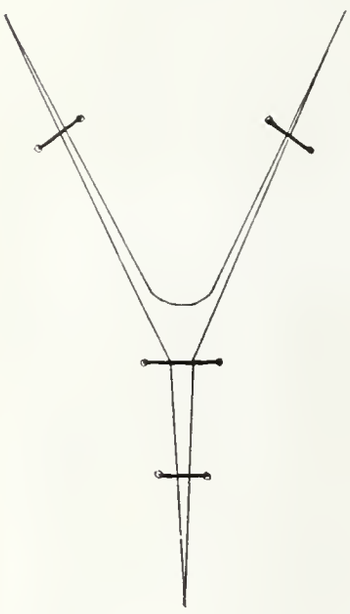


Fig. 1.

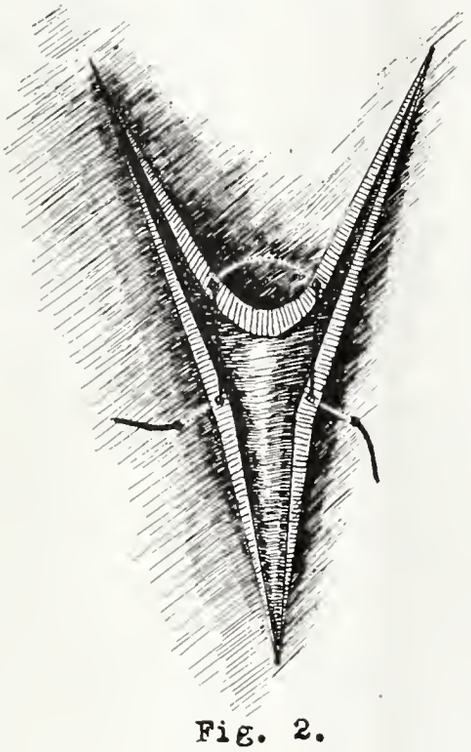


Fig. 2.

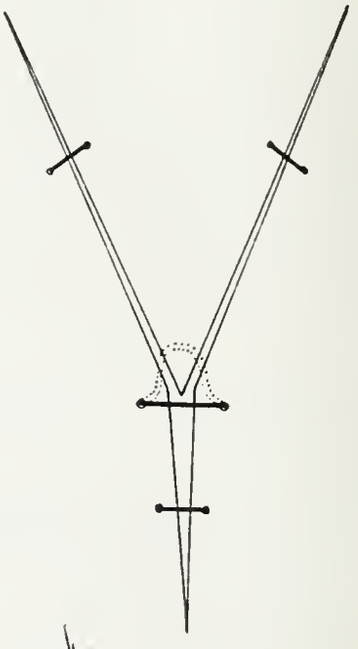


Fig. 3.

A METHOD OF SUTURING "Y" SHAPED WOUNDS.

By J. C. EGEBERG, M. D., San Francisco.

A case of multiple lacerated wounds of the face (windshield accident) came under my care recently where the primary suturing had been done several days before in a country town. The suturing was of the type most commonly used in the closure of "Y" shaped wounds, namely, that shown in Figure 1, and, as a result, the patient has three lumps upon his face that spoil his appearance and will require future plastic work for their correction.

There is always retraction of the triangular piece in "Y" shaped tears of the skin and it is impossible with the commonly used type of suture to overcome this retraction. By the use of a suture placed as illustrated in Figure 2, this retraction is overcome and the apposition is perfect.

The point of the triangular piece is first grasped with tissue forceps and stretched downward in order to determine the point of introduction of the suture. The needle is now put through the skin at the point of branching of the "Y," and is then brought out towards the bottom of the wound; the needle is now passed through the apex of the triangular piece, below the skin and at the same level as where the suture emerges from the side wall of the wound; the needle is now inserted in the opposite side wall of the wound, from within outwards and directly opposite to the introduction of the first part of the suture. On tying the two ends the triangular piece is drawn down by the straightening of the buried portion of the suture and permits perfect apposition of the tip of the triangular piece;—preventing the puckering of the tip and giving three straight line wounds for any further suturing, as illustrated in Figure 3.

The suture corresponds to the crown suture in the Emmet operation for perineal repair.

Wounds with two or more triangular tears are capable of being sewed in the same manner, giving perfect approximation.

Central Emergency Hospital.

INTESTINAL OBSTRUCTION*

With Report of a Case Occurring in a Geophagist.

By HERBERT A. JOHNSTON, M. D., Anaheim, California.

Any part of the intestinal tract may become obstructed and the condition may be termed acute, chronic, or chronic becoming acute. Since it is not purposed in this paper to deal with the incomplete, or chronic varieties, we shall consider only the acute forms of the disease. In this class we find the cases where early diagnosis and prompt relief are paramount to the preservation of the life of the patient.

In order better to understand the causes of intestinal obstruction let us attempt to classify them in regard to the relationship which they bear to the intestinal wall itself. (1) *Intramural*: Such as foreign bodies, gallstones, enteroliths, impacted feces, or anything operating within the lumen of the

* Read at the meeting of the Southern California Medical Society at San Diego, Cal., May, 1918.

bowel. (2) *Mural*: Such as ulcer, gumma, malignancy, paresis, invagination, volvulus, or any pathological condition of the wall itself. (3) *Extramural*: Such as incarceration, mesenteric embolism, strangulation, tumor, or any pathological condition which exists outside of the bowel wall and yet is capable of producing occlusion within it. Obviously there are many conditions which might arise within the abdominal cavity, each in turn being capable of producing intestinal stenosis.

The symptoms of obstruction are not always clear. Those usually found are:

1. Pain—which occurs in about 90 per cent. of all acute cases.
2. Vomiting—usually associated with pain, and generally absent when there is none.
3. Constipation—yet the patient may have one or more movements of feces from below the point of obstruction.
4. Distension—generally a later symptom.
5. Rigidity—associated with pain, and over the lesion.
6. Tenesmus—a fairly frequent symptom in obstruction involving the colon.
7. Tenderness—a very variable symptom.
8. Visible peristalsis—recognizable in patients having thin abdominal walls.
9. Palpable tumor—occurs in perhaps 25 per cent. of all acute cases.

If we could speak of any symptoms as being always present in this malady, our early diagnosis would be greatly simplified, but such is not the case. While all the above symptoms may occur in one instance, there are many others where a diagnosis has to be made from one, two, or perhaps, three of the foregoing. Generally the first three are present early enough for a satisfactory diagnosis, the remaining ones following each other in succession should relief not come.

The early symptoms are modified somewhat by the location of the occlusion, and may be classified as follows, according to whether it is in the upper, ileo-caecal or sigmoidal regions of the intestinal canal.

(1)	*Upper region*	Pain—usually severe.
	Duodenum.	Vomiting — bilious — not fecal.
	Jejunum.	
	Upper Ileum.	Constipation—may not be complete.
		Distension—usually absent.
		Tenesmus—usually absent.
(2)	*Ileo-cecal region*	Pain—variable.
	Lower ileum.	Vomiting—becoming fecal.
	Caecum.	Constipation—after colon is emptied.
	Colon.	Distension—gradually increasing.
		Tenesmus — frequently present.
(3)	*Sigmoidal region*	Pain—often absent.
	Descending colon.	Vomiting—often absent.
	Sigmoid flexure.	Constipation—absolute.
		Distension—increasing.
		Tenesmus—frequent.
		Bloody and mucous stools.

Plate 1.
"a"—Apparent "foreign body" in stomach.
"b"—Coils of ileum containing sand and earth.

Plate 2.
"a"—Coils of ileum more fully distended and stomach emptied of "foreign body."

From the above it will be noted that pain and vomiting are early symptoms when the obstruction is high and tenesmus with increasing distension are characteristic when it is low. The higher the lesion the more rapid and severe is the course of the disease. The difficulties of early diagnosis will be illustrated by the following case:

V. D., aged two years. Brought to hospital at night, July 29, 1917, apparently quite ill and supposed to have swallowed a piece of tin the previous day while playing on the sand at the beach, as the child was in the habit of eating earth.

Pulse, 96; temperature, 101; respiration, 40. Radiogram of whole abdomen revealed what was apparently a foreign body in stomach and some distended coils of small intestine at caecum (Plate 1). Brown, liquid, very offensive stool at 11 P. M. Enemas during night returned clear except for traces of blood. Another radiogram (Plate 2) in the morning showed that the supposed foreign body had left the stomach and that the pelvis was filled with coils of distended ileum. Laparotomy revealed an invagination of ileum into caecum about four inches in length, the bowel being filled with earth and sand. This was reduced in the usual way. At five P. M. quantities of earth and sand were expelled per rectum. Similar movements continued for the next two days, the patient succumbing on the third day after operation. The supposed foreign body must have been sand.

The outstanding features of this case are:

(1) The absence of pain and vomiting.

(2) The history of swallowing a piece of tin apparently corroborated by a radiogram.

(3) The accumulation of sand and earth at the caecum and lower ileum.

(4) The radiograms showing coils of ileum though no barium or bismuth had been administered.

A PLEA FOR BETTER CO-OPERATION BETWEEN PHYSICIANS AND DENTISTS.

By C. H. WAKE, D.D.S., Los Angeles.

Those who shoulder the burden of responsibility in the present world struggle are subject to more or less criticism. But after the hysterical stage has subsided and the criticism is based on a desire for truth and justice, then such criticism becomes constructive and not destructive. Just so is the purpose of the criticism which is to follow.

It has been less than a century ago since Dr. Harris conceived the modern idea of including dentistry with the other specialties of medicine and teaching oral pathology with dental mechanics. But being unsuccessful in his efforts to add a chair of dentistry to any of the medical schools of his day, he was forced to establish a separate school. This school was the Baltimore College of Dental Surgery established in 1839,—the first in any country. (An Epitome of the History of Medicine by Roswell Park, A.M., M.D.)

As dentistry at that time was in its infancy, being composed almost wholly of mechanical training, it was considered foreign to the science of healing; but the babe has grown and developed into manhood so that it is hardly recognizable.

It is true that the adult "Profession of Dentistry" still retains some of its infant characteristics, but they have been so changed and improved that the infant, as of old, is almost entirely forgotten.

As good environment develops the individual to higher planes, making him more useful to society, so have the scientific teachers of pathology and bacteriology elevated dentistry, the better to serve mankind.

I speak of pathology and bacteriology to the exclusion of others, because it is special pathology of dental origin,—that is the common ground on which the physician and dentist must meet.

In order to best serve our fellowman in the science of healing, there must be co-operation between physician and dentist, inasmuch as pathological conditions, of dental origin, influence the general system in whole or in part.

I quote in part from an article published in the journal of the A. M. A., Dec. 5, 1914, written by Dr. C. H. Mayo, M. D., Rochester, Minn.:

"MOUTH INFECTION AS A SOURCE OF SYSTEMIC DISEASE.

"It has taken a long time for the general public to appreciate the full role of infection in the production of death, while even in the medical profession, more has come from the study of infections in the prevention of disease than in increasing the means of cure of disease, great as have been the results of treatment.

"Since all animal life depends on some other form of cell life, vegetable or animal, it seems but the part of all life to carry on this process of germinative development and maturity.

"It is only the resistance of healthy cells that prevents the inroads of the myriads of ever-present bacteria and animal parasites which are striving to get a foothold that they may in turn carry on their life work.

"Disease, then, is an inflammatory process from infection and the efforts at repair. It may also be chronic from the failure of cell life through lack of defense, from defective nutrition and advancing age."

"Infections which produce the greatest number of diseases enter the system by way of the alimentary and respiratory tracts."

"The great importance of the well-known diseases of the nasal passages with their sinuses, the lymphoid tissue of the pharynx, including the tonsils, and the diseases of the gums and teeth, which have been given prominence by the dental profession during the last three years, is now more generally appreciated."

"Certainly enough is known concerning infections and their mode of entrance, that the infected and diseased mouth and respiratory tract must be looked on as most serious menaces."

"In chronic and recurring diseases, a search must be made to establish positively the non-participation of each of the several sources of infection.

"The physician engaged in this line of observation requires fully as much training in the rudiments of dentistry as the dentist does in the signs of infectious diseases. While we have leaders in all professions, through the energy of their kinetic glands, the big stick which leads to our advancement is in the hands of the progressive and educated public who are constantly demanding more of their dentists, of the medical profession and of

the state in protecting them against preventable diseases."

In view of the fact that when all organs function properly, nature's resistance to the attack of disease is at its maximum, the same law applies to each and every unit of the human anatomy, therefore it is of paramount importance that the dentist, when operating on the teeth, should be ever mindful that the normal function of the teeth and adjacent tissues be not impaired.

Let us consider some of the operations that come under this head.

The treatment of the root canal and its contents, the dental pulp, is the greatest source of trouble of dental origin except it be pyorrhea, with which a physician is concerned, often resulting in the well-known aveolar abscess. The most common of the several reasons are:

Obscurity of factors with which we have to deal; irregularity of size and shape of root canal, making root canal treatment very uncertain without the use of the x-ray. Until more dentists insist that treatment of root canals by modern methods is essential, though more expensive to the patient, this source of trouble will continue to be grave. While there is some excuse for the dentist falling short of an ideal root canal treatment, due to obscurity of factors with which he has to deal, he must be held accountable for all operations contributing to pyorrhea encouraged by lost function of the gingivae, namely, failure to remove from the teeth, calculus under free gum margin; ill-fitting gold crowns; unfinished fillings beneath gum margin; shape of proximal surface, when restored artificially, which becomes a factor of the contact point and interproximal space,—the protection for the septal tissue which in turn is an important resistant to pyorrhea, when functioning properly.

Making large gold fillings in teeth, overtaxing the peridental membrane by the force of the mallet necessary to obtain the required specific gravity. The same is true of faulty articulation of artificial substitutes for teeth that are anchored to the natural roots, all of which encourage inflammation of the adjacent soft tissue, and in turn contributes to pyorrhea.

The fact that these faulty dental operations are so prevalent throughout the country is appalling, and one who has the interest of fellowman and the advancement of science at heart must look upon the situation with chagrin, in view of the present advanced state of science. It has been my good fortune to gain a vast clinical experience, having been associated with several dental colleges throughout the country as clinical instructor. The dental college is a clearing house for patients who have had failures in their dental operations, who are in search for superior treatment, and I speak authoritatively when I say that in the East, in the Middle West, in the Rocky Mountain region, and on the Pacific Coast, that focal infection is too often the result of poor dentistry.

Please do not understand me to be unwilling to give credit where credit is due, but, briefly, permit me to add that there are many on the Pacific Coast who are earnestly striving for the truth in dentistry, and bountifully contributing to the advancement of dental science.

So rapid and positive has been this progress that the crown of glory of the Middle West, where the science of dentistry has reached its highest pinnacle, will undoubtedly soon be transferred to the Sunny Southland. This is not only due to the fact that every specialty of dentistry is well represented in our locality, by such authorities in their various specialties as Drs. Edward H. Angle, Julio Endelman, C. J. R. Engstrom, B. B. McCollum, Nye White Goodman, and others, but we have with us Drs. Frederick W. Frahm and Walter G. Crandall, who have been instrumental in placing Iowa at the head of the list in dental science.

Those who have followed the trend of events during the past decade realize full well that the message has been spread broadcast that we should be more thorough in the simple operation of removing calculus from the teeth, and yet, how often do we find this source of irritation under the gum margin that has been overlooked repeatedly during previous cleaning operations. When the average dentist, and it is the average that we must consider, when drawing a logical conclusion,—when the average dentist overlooks such a simple, though destructive factor as calculus beneath the free gum margin, after being repeatedly cautioned to the contrary, it is logical to presume that he may overlook a focus of infection.

Not only is the dentist called on to treat these special pathological conditions, but he must be ever mindful that his dental operations do not contribute to them. The radiograph has revolutionized dentistry; has revealed our shortcomings; has elevated dentistry to heights previously unknown, from the mechanical world to a prominent place in the "Science of Healing." It has brought us in closer touch with the physician.

I wish to quote in part from an article by Dr. David Bernhardt Freundlich, in the January, 1915, Laryngoscope:

"THE TEETH AS A PRIMARY FACTOR IN DISEASES OF THE EAR, NOSE AND THROAT—THE DIAGNOSTIC VALUE OF CO-OPERATION OF THE OTOLOGIST, RHINOLOGIST, LARYNGOLOGIST WITH THE DENTIST.

"That the teeth are frequently a contributing factor in pathological conditions of the ear, nose and throat, has long been evident to the rhinologist, laryngologist, otologist and dentist. The fact that the teeth are very often a *primary* factor in such conditions has been more recently recognized by the men of both professions.

"During the last few years, prominent men abroad and in this country have been studying the relationship existing between the teeth and these organs, and many interesting and instructing papers have appeared in the medical journals as a result of their studies. Lermoyez of France, Tilley of London, and B. Frankel of Berlin have contributed valuable literature on the subject."

Dr. Freundlich further cites instances and cases by Bayer of Brussels, Grinwald, Zuckerkandl, Dmochowski, George L. Richards of Fall River, Mass., and many other prominent scientists.

Dr. Freundlich states:

"Before closing, the writer wishes to call the attention of the physician to an interesting report by Dr. C. B. Nesbit, of Valparaiso, Indiana, appearing in a monthly bulletin of the Indiana Board of Health, in 1912. Dr. Nesbit reports a three years' epidemic of scarlet fever in the city, to terminate which, a school inspection was begun. The teeth of 190 children were examined; 937 cavities were found; 454 in permanent teeth; fifty had scarlet fever during the epidemic; 238 cavities were found, one had twelve cavities, two had ten, two had no cavities. After the examination, it was insisted upon that all cavities be filled before the patient is released from quarantine.

"Dr. Nesbit believes with the writer that cavities are incubators for all kinds of pathogenic bacteria. He says, 'Cavities are known to contain the germs of diphtheria, pneumonia, tuberculosis, influenza, and other diseases, which enter the body through the respiratory tract, and as scarlet fever, measles, whooping cough and mumps are believed to be respiratory infections, it is fair to presume that cavities would be equally efficient incubators for these diseases.'

"As a step further in the line of preventive medicine, would it not seem to be the duty of the laryngologist, rhinologist, otologist and dentist, within whose province these incubators of disease lie, to impress upon the patient the great danger to which he is exposing, not only himself, but the community at large, by allowing these cesspools of poison to remain?

"In conclusion, the author of this paper is appreciative of the interest being taken by the men of this branch of the medical profession in the matter of co-operation, and is looking forward to the time when all will meet on common ground for the discussion of conditions relative to their common field of operation and in a relationship as intimately associated as that existing between their professional provinces."

How best can we co-operate with the physician to attain the highest degree of efficiency in rendering the best services the science of healing has made possible?

Diagnosis being the first and all important factor with which we have to deal, we must be sure that no stones be left unturned in locating the seat of trouble, and factors influencing same. While the X-Ray is indispensable in aiding us in our diagnosis of oral pathological conditions of dental origin, it is very limited in its scope of locating foci of infection. Pyorrhea pockets and pericemental abscesses so situated that their relation to the tooth would not show in the Radiograph, therefore, in addition to the X-Ray, the dental diagnostician must be well versed in anatomy, pathology, bacteriology and clinical experience. An extensive knowledge or anatomical occlusion and operative dentistry aids one in locating the predisposing causes of pathological conditions. In other words, to be forewarned is to be forearmed.

I have tried to show that dentistry has progressed very rapidly, from a mechanical art to a prominent place in Science of Healing; that special oral pathology is the common ground on which the physician and dentist must meet. The welfare of the patient and the progress of the science of healing depends on the co-operation of the two professions.

In conclusion, in order to attain the highest degree of success, in revealing the hidden mysteries of lesions whose foci of infection can be located about the oral tissues, one must not only use the X-Ray, but must acquire all the knowledge that anatomy, special pathology, and bacteriology place at his command.

In view of the previously mentioned facts, it seems logical to believe that the field is broad enough to justify the specialty of dental diagnosis to the exclusion of a general practise.

1004 L. A. Investment Building.

Discussion.

Dr. Bullard: I see many cases of corneal ulcer. The bad tonsils were removed, but the ulcers persisted, twenty of them. The ulcers got well when the teeth were looked after, which really were the foci of infection. I had some fifteen cases of corneal ulcer due to defective teeth. We should co-operate with the dentists.

Dr. Zeiler thinks that focal infection has become an obsession. We should remove focal infection, but tonsils and teeth are often removed without cause. Streptococcus viridens is nearly always found at the roots of teeth. There are more than one variety.

Dr. Cline: Sometimes impaired teeth may cause heart trouble. The heart's beat became regular after correcting the faulty condition of teeth.

Dr. Reynolds asked whether the enamel could be damaged by improper scaling. Dr. Wake said yes, but is less likely to be than the cementum which is not so dense, and mentioned the kind of instruments to be used.

Dr. Herbert: A young man became a melancholic maniac, but the dentist could find no teeth at fault. By means of electricity the tooth and abscess were located and removed. The patient was cured.

Dr. Levin: I have diagnosed syphilis by looseness of teeth, excrescences on skull and headaches. The meeting was adjourned.

WAR REFUGEES IN JERUSALEM.

Thousands of Armenian refugees at Port Said and many homeless families in or near Jerusalem are now being cared for by the American Red Cross according to cable advices received by the war council from the Red Cross Commissioner to Palestine, headed by Dr. John H. Finley. The relief work was undertaken at the request of Gen. Allenby, and is being carried on under the direction of the military governor.

The Red Cross has established a general dispensary and hospital with a children's clinic in Jerusalem. Hundreds of persons have already received treatment there. At the request of the government of Jerusalem the organization has taken over two orphan asylums with 400 children. Three hundred Russian refugees are also being cared for in Jerusalem by the Red Cross.

Book Reviews

The Composition of Certain Patent and Proprietary Medicines. By John Phillips Street.

Although the war is distracting our attention from the patent medicine fraud for the time being, we may recommend the above book as a means of obtaining relaxation and diversion. Running through its pages we find a lot of old friends, such as Coke's Dandruff Cure, Hamlin's Wizard Oil and Bowden's Indian Balm. In spite of the times, I presume that human credulity still persists. War brides and old men left at home will resort to some of these infallible remedies as a source of consolation. It therefore behooves every doctor who is able to read the sign posts to get this little directory of "fakirs' delight." It will amuse, instruct and edify. S. P.

Essentials of Materia Medica and Therapeutics for Nurses. By John Foote. Third edition, pp. 310. Philadelphia: Lippincott. 1918.

This book contains tables of drugs, descriptions of the physical properties, physiological action, therapeusis and administration of the more important ones, together with many practical points of value to nurses. It contains chapters on the preparation of solutions and on dosage, tables of poisons and antidotes and other reference tables. It may be recommended as an excellent textbook. L. E.

A Laboratory Manual of Qualitative Chemical Analysis. By A. R. Bliss, Jr., M. D., Ph. G., Professor of Pharmacology, School of Medicine, Emory University, Atlanta, Ga.; formerly Professor of Chemistry and Pharmacology, Graduate School of Medicine, University of Alabama. Second edition, revised and reset, 194 pages with working tables. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, $2.25 net.

A handy laboratory manual of qualitative chemical analysis and includes the well-known differential tables in a compact form. It may be recommended to students and as a laboratory manual. L. E.

Treatment of Cavernous and Plexiform Angiomata by the Injection of Boiling Water (Wyeth Method). By Francis Reder. Illustrated, 75 pp. St. Louis: C. V. Mosby. 1918.

An interesting little monograph with many excellent plates, some of which are in color. The original article appeared in Surgery, Gynecology and Obstetrics nearly three years ago. L. E.

Modern Operative Bone Surgery, with Special Reference to Treatment of Fractures. By Chas. Geo. Geiger. Philadelphia: Davis Company. 1918. Price $3.00.

This book is devoted entirely to autoplastic, living bone work; its application in various fractures, in tuberculosis of the spinal column and whenever bone transplantation may be serviceable to reconstruct skeletal deformities. The introductory chapters on the theory of growth and reformation of bone, include the latest research in the histology and histo-pathology of bone and are of intense interest to the student and the bone surgeon. The author criticizes and discourages the use of foreign non-absorbable material, such as metal plates and staples, in bone surgery, and advocates instead the bone transplant and bone graft. A detailed description of the Geiger's motor with attachments and accessories thereto and the exact technic in autogenous living bone transplantation in the manifold conditions mentioned by the author, make the book a very useful and timely addition to the literature of operative surgery. A. G.

The Medical Clinics of North America. Volume 1, No. 6. (The Southern number, May, 1918). Octavo of 224 pages, 35 illustrations. Philadelphia and London. W. B. Saunders Company, 1918. Published bi-monthly. price per year, paper, $10.00; cloth, $14.00.

Contents.—J. B. McElroy: Nephropathies. G. S. Bel: Comparison of essential pneumonias from standpoint of clinical significance. Typhoid fever complicated with purulent cerebrospinal typhoid meningitis and no intestinal lesions. C. L. Minor: Artificial pneumothorax (Forlanini). J. S. McLester: Prevention of dissemination of disease. B. W. Fontane: Achondroplasia. Tuberculosis of the peritoneum. Syphilitic fever. C. C. Bass: Malaria. L. T. Royster: Care of premature infant. J. R. Snyder: Ten pellagrins in two families in same neighborhood. J. H. Gibbes: Hodgkin's disease. Reflex gastrospasm. W. H. Deaderick: Malaria. R. Wilson, Jr.: Gonococcemia. J. E. Paullin: Myocardial infarct following coronary sclerosis. J. P. Munroe: Severe headaches.

Reclaiming the Maimed. Handbook of Physical Therapy. By R. Tait McKenzie. New York: Macmillan. 1918.

This little volume gives a brief but comprehensible description of physical measures used in the functional reconstruction of body deformities. This application of physical forces, such as electricity, water, light, heat, motion and curative work for the treatment of convalescent soldiers are excellently depicted by the author, who has gathered his experience in Great Britain and Canada while on inspection tours as a medical officer of the United States Army. Muscular reeducation and the measurement of muscle power are described in an excellent article which, by the way, has not had a previous publication. Much valuable information in this rather unfamiliar branch of therapy can be obtained from this chapter. Physical therapy as a science has grown so rapidly since its recognition as a very necessary adjunct in the treatment of war and industrial cripples, that this volume is highly to be recommended as a guide for medical men who deal with cases of injury whether sustained in the field of battle or industry. A. G.

Dental and Oral Radiography. Textbook for Students and Practitioners of Dentistry. By James D. McCoy, D. D. S.; pp. 179. Second edition. St. Louis: C. V. Mosby Co. 1918.

As stated by the author, this book is intended for the beginner in dental radiography. Of particular merit is the clear, lucid style and logical manner in which the basic facts of dental and oral radiography are presented. Although the book is quite elementary, it is comprehensive and covers the discovery of the Roentgen ray, electrophysics, machine types, tube types, technique and radiographic interpretation. The chapter on the technique of handling X-Ray machines and tubes seems to be adapted to the limitations of the old and almost obsolete type of "coil"; it is advisable for the beginner to disregard the procedure given in the book and rely upon the instructions given by the manufacturer of the particular machine used. The author states that a rather high tube (backing up about five or six inches in parallel spark gap) is desirable for dental work. This is contrary to the general practice of those specializing in dental radiography, the preference being for a tube backing up three and one-half or four inches. The back is evidently based upon many years' actual practical experience and is well worth the careful study of the dentist who is interested in this branch of roentgenology. C. O. T.

Surgical Clinics of Chicago. June 1918, Vol. 2, No. 3. Published bi-monthly by W. B. Saunders Company. Price per year, $10.00.

Contents.—A. J. Ochsner: Renal calculus and gall stones. A. D. Bevan: Kidney stone. Ureteral stone. Cholemia. Ulcerating sarcoma of neck. Fibroma in mesentery at ileocecal junction. Jejunal obstruction from adhesions at site of gastro-enterostomy. G. Kolischer and J. C. Eisenstaedt: Ureteral stone. F. Smithies: Gall-bladder disease (1000 cases). C. Beck: New method of gastrostomy. F. A. Besley: Surgical affections stomach and duodenum. F. G. Dyas: Abdominal tumors and local anesthesia. Hoglund bone transplant for ununited tibial fractures. N. M. Percy: Gasserian ganglion tumor. D. N. Eisendrath: Chest injuries in civil life and war. E. W. Ryerson: Bunions. E. H. Ochsner: Potential and acquired static flat-foot. C. G. Buford: Umbilical hernia in infants and children. R. T. Vaughan: Incarcerated right scrotal hernia. T. J. Watkins: Bicornate uterus. Syphilis with exudates in uterus, etc. G. E. Shambaugh: Surgical affections nose, throat and ear.

Principles of Hygiene: For Students, Physicians and Health Officers. By D. H. Bergey, M. D., Assistant Professor of Hygiene and Bacteriology, University of Pennsylvania. Sixth edition, thoroughly revised. Octavo of 543 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, $3.50 net.

The sixth edition of this valuable and conservative work on the science of hygiene comes to hand with practically the whole volume brought up to date and revised. Necessarily, the chapters devoted to naval and military hygiene must lag behind in the tremendous strides that these branches have made and are making at the present time. But with this single exception, the rest of the volume, devoted to the hygiene of civil life, is a model of thoroughness and can well be used as a reference for all but the most detailed technical purposes. Of especial merit are the sections on industrial and school hygiene and those on the infectious diseases. As a book for the purpose of affording one a comprehensive survey of the whole hygienic field it can be recommended unreservedly.

G. H. T.

Medical War Manual No. 7. Military Surgery of the Zone of the Advance. De Tarnowsky.

This is No. 7 of a very useful series of books. These manuals are compiled by the best authorities obtainable, and contain the essential experiences of our surgeons. For conciseness and direct information they are models. Any one even remotely connected with the war issues of today and its medical phases will do well to have these books in the form of a portable library to serve as his guide and source of information. The chapters taken up in this particular volume are as follows: General Considerations; The Regimental First-Aid Station During Action: The French Zone of the Advance: The British Zone of the Advance; Projectiles; Bacteriology of War Wounds; Traumatic Shock; Hemorrhage; Wounds of the Soft Tissues; General Treatment of Wounds; Tetanus; Gas-Bacillus Gangrene: Cranial Injuries: Wounds of the Face and Neck; Wounds of the Thorax; Wounds of the Abdomen; Wounds of the Bladder and External Genitalia; Spinal Injuries; Wounds of the Peripheral Nerves; Gunshot and Other Wounds of Joints; Special Features in the Treatment of Joint Wounds; Treatment of Compound Fractures not Involving Joints; Splints Used in the Advanced Zone During Transport: Burns; Gas Poisoning; Trench-Foot; Roentgenology in War Surgery; and Treatment of Infected Wounds by Carrel-Dakin Technic.

S. P.

Nutrition and Clinical Dietetics. By Herbert S. Carter, Paul E. Howe, and Howard H. Mason. Philadelphia and New York: Lea & Febiger. 1917.

All of the authors are from Columbia University, New York, and are already well known by their writings on fasting (Howe), diet lists for the Presbyterian Hospital (Carter), and pediatrics (Mason). Their combined work results in a practical blending of laboratory findings with clinical experience.

The reader is very properly introduced to the physiology of digestion, followed by chapters on energy requirements of man and a short, but explicit chemistry of foodstuffs. The rest of the book is devoted to specific diets in the different diseases, as well as in infant feeding, obesity, artificial feeding, and presents principally the routine work of later years and approved methods.

The etiological factors, prominent in every chapter, are particularly illustrative in the treaties on diabetes mellitus where text and diagram help to visualize the very maze of glandular stimuli. Carefully detailed and explicit charts serve to simplify the computing of dietaries, i. e., in nephritis, diabetes, obesity, gastric ulcer, typhoid; but no dietaries are included for Army, Navy, hospitals or almshouses, the authors wisely leaving it to the physician's judgment to adopt deductions from foregoing chapters to the requirements of each institution in question. Supplementary tables are attached on food values and Fisher's table of 100 calory portions.

Though not exhaustive, the book is an excellent one for reference and is to be commended for its clear disposition of the various subjects.

M. H. L.

Diseases of the Chest and the Principles of Physical Diagnosis. By George W. Norris, M. D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, M. D., Assistant Professor of Medicine in the University of Pennsylvania, with a chapter on the Electrocardiograph in Heart Disease, by Edward B. Krumbharr, Ph. D., M. D., Assistant Professor of Research Medicine in the University of Pennsylvania. Octavo volume of 782 pages with 413 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Cloth, $7.00 net. Half Morocco, $8.50 net.

This latest volume on the diseases of the chest is very exhaustive and most comprehensive. Two hundred and fifty of its pages are devoted to the physical diognosis of pulmonary and circulatory diseases, while the balance, some eight hundred pages, deals with all the diseases found in the thoracic cavity. The book is too bulky, too much space is devoted to physical diagnosis, making it seem that the volume, which contains such excellent material, is padded for publication. No detail of physical diagnosis is omitted, even to the description of stethoscopes, hammers, and plessimeters. The chapters on pulse tracings, blood pressure, the use of the cardiosphygmograph and the electric cardiograph, are especially commendable. They are clearly and accurately written, up-to-date, with numerous and splendid illustrations.

Part three of the book, written by Landis, deals with the various pulmonary diseases. We are disappointed that Landis, out of his vast experience, did not give us a personal view upon the etiology of pulmonary tuberculosis. He handles this chapter rather briefly, simply relating the various theories of pulmonary tuberculosis, without committing himself to any one, although if we read between the lines, he rather agrees with his colleague, Paul Lewis, who is of the belief that pulmonary infection in early life has little influence on the disease as it presents itself in adults. It is also

stated that "there can be no doubt that infection in adult life is far more frequent than is ordinarily taught." This is quoted because the statement is at variance with the most recent views of some of our authorities, i. e., pulmonary tuberculosis practically always has its inception in child life. A contrary opinion coming from Landis' pen must certainly be given careful thought and attention.

The chapters on the pneumonias and their complications are very complete and contain the newest work of Cole, Dochez and Avery on typing. We are duly grateful for the chapter on the diseases of the diaphragm as the textbooks give 'litttle or nothing on this subject.

The rest of the book is devoted to circulatory diseases with each carefully detailed as to etiology, morbid anatomy, pathology, physiology, symptomatology, and physical signs. The chapters on diseases of the heart are interspersed with excellent pathological and clinical illustrations.

In conclusion the book of Norris & Landis may be commended as an exhaustive treatise on the physical signs and diagnosis of diseases to which the organs of the thoracic cavity are heir. Criticism must be made of the space given to time-worn, well-known and hackneyed subjects, while the personal views of these two excellent teachers of medicine are greatly missed. W. C. V.

Correspondence

Concerning Physicians and Surgeons College, San Francisco.

San Francisco, Cal., August 24, 1918.

To the Editor:

I have been asked by some of the alumni of the College of Physicians and Surgeons of San Francisco, inasmuch as incorrect rumors are in circulation, to publish a brief statement of the present position of the Medical Department of that institution. In January of this year, I was requested by the Alumni Association and the Board of Trustees to undertake the reorganization of the Medical Department in accordance with the requirements of the State Board of Medical Examiners. This quite onerous task I undertook with the clear understanding that the interests of the student body and the public should be protected by bringing the standard of teaching up to that demanded of an acceptable college according to the requirements of the American Medical Association. To this end changes were made in the faculty, and in the administration of the laboratories and clinics which were considered satisfactory by the State Board of Medical Examiners. The session was lengthened by four months to enable the classes to make good some of the defects they had suffered from during the period of reorganization. How effective this work has been, is manifest by the fact that of the students who have presented themselves under the new conditions to the State Board of Medical Examiners, eighty per cent. have passed. The Board of Trustees very faithfully and thoroughly supported me in the policy of establishing a first class college and spent very large sums of money in improvements. Nevertheless at the end of the summer it became apparent that it was not possible to maintain a satisfactory staff of instructors under the conditions induced by the war. The army took from us Dr. James Eaves, Dr. Lawrence Hoffman, Dr. Bruman, Dr. Kavanaugh and others in immediate prospect. The department of pathology could only be maintained in a state of inefficiency. Under these circumstances I applied to the Educational Council of the American Medical Association for permission to send the students for enrollment in other acceptable colleges to complete their medical education, the College of Physicians and Surgeons of San Francisco ultimately graduating them on the returns made by such institutions. This permission was granted and the task of continuing their education has been undertaken by the Medical Department of the University of Southern California. This solution of a difficult problem is satisfactory to everyone concerned. Let me state in conclusion and in refutation of statements that have been put in circulation:

First. That the American Medical Association did not refuse to raise the grading of this college under the new administration, for the very good reason that it has not examined it.

Secondly. None of the new faculty severed their connection with the college as a result of dissatisfaction with the conditions. On the contrary the letters of Dr. James Eaves and others were warm in commendation and hope for its future.

Thirdly. The transfer of the students to the Southern College was solely at our instigation and in accordance with the precedent of other institutions.

Fourthly. The success of the teaching of the present faculty is manifest in the returns of the Board of State Medical Examiners, whereby we are credited with passing fourteen students out of seventeen, or eighty per cent—amongst those were two of the highest markings in the examinations.

Very truly yours,

H. D'ARCY POWER,
Dean, College of Physicians & Surgeons.

FROM DR. R. H. HUNT, "OVER THERE" WITH THE NAVY.

July 22, 1918.

. . . I have had quite a pleasant day. Have been visiting one of the big ships here in the harbor. There were several medicos aboard whom I had met in New York, so we had a good time talking things over. I had gossip that they wanted and they had a lot for me. From a cold storage ship I went to the Corsair, J. P. Morgan's yacht. My, but I was glad that he had so much money to make such a fine boat. She is one of the fastest and largest yachts in the world and I enjoyed my stay there. From there I had a trip by land and sea to this place where I have been assigned to a couple of boats and now on this very good destroyer. Our work has a lot of thrills in it and it is not all comfort. I thought I did not get seasick, but I have changed my mind about that. The things these boats do are wonderful and quick. You think every now and then that the elevator has broken, and sometimes it takes a long drop before it starts back, too. I would get along splendidly as a one-armed man after this training because we always have to have hold of something. I can dress with one hand and eat with one hand and both feet. If I only had a prehensile tail I would be well fixed.

One does not have much medical work to do. It is mostly prophylactic and inspection stuff. If you did get a case you would send it to the hos-

pital, for this is surely no place in which to look out for anyone, nor is it a comfortable place in which to be sick.

Randall is with Army Base Hospital No. 30. It was wet and muddy there, so much so that I was very thankful that I was not in the Army. I don't think much of sleeping on wet ground and standing up to eat. I would rather have no ground and eat with one hand I suppose, but just the same they did not look a bit comfortable.

This place is nearly an Amex city now, even the kids are beginning to throw baseballs through the windows. If they would only quit begging pennies; my, it gets tiresome. . . .

While the weather lasts I will start a letter to you. Everything on a ship of this type depends upon the weather. They discovered me on the yacht and took me away from that nice home. I had quite an interesting trip from the yacht to the ship I was assigned to. Took me a week by land and by sea. No, I was not traveling all the time. I was looking for my trunk some of the while and then had to wait for a vessel to take me on the rest of the journey. In one of the cities I went through there was a large Engineers' camp and I assure you they were doing a lot of work there. The medical work was not very spectacular, no more than it would be around any machine shop or engine yard but it was work that had to be attended to and we all can't be fishing out shrapnel. Though I guess that there is plenty of that to do right now, but the press news is good so that helps a whole lot.

I am now on a destroyer and it is a great life if you don't weaken; if the expression ever fitted, it fits here. I am getting so I could get along with one hand, if I had no other to hang on with. You know what the Fort Bragg bar can do, well we just pray for nice smooth weather like that after we have crashed into a head wind and sea for some 40 hours. This boat slips along at 32 knots and I assure you that is traveling some—I know it is the fastest I have ever dashed along. If the waves don't get out of our way why we just bust into them. Sure I was seasick at first but I am getting used to it now. I want to see the one who does not get sick. When it gets rough you don't get sick, as you are too busy hanging on; there is no sleep, no eat, just jumps and bumps. I have a room up where they keep the paint on most ships and I don't even think you can imagine what it is like there.

The work is interesting, no, not from a medical side, for there don't seem to be much time for that. This is no place for a sick man. The medical work is mostly prophylactic, early and quick diagnosis, so that we can transfer the cases to the hospital. The minor surgery always comes at the worst time when one dare not attempt anything; it gets first aid and when things quiet down gets further attention. I am fleet surgeon, as it were, having a number of destroyers depending upon me. Each of them has a Chief Pharmacist Mate on board and I assure you these men are very fine fellows and are to be depended upon.

To-day we missed something, don't know what it was, but were off in answer to a S. O. S. when we were called back; it wasn't much but then we are ready to take in little bits of excitement once in a while. Not long ago we went to a sinking. The Covington was torpedoed and it was hoped that she could be brought in. We kept the coast clear while the tugs did their best but it was no use, she filled up and went down; no one was lost, but it seemed a shame to see such a fine ship go down. I had been aboard her not long before and was greatly impressed with her greatness and grandness.

Fraternally yours,

R. H. HUNT.

County Societies

ALAMEDA COUNTY.

The Alameda County Medical Association opened the year's work Monday evening, August 19, 1918, with the following program:

I. Technic of Vaginal Hysterectomy. Illustrated by stereopticon.....By Dr. Chas. A. Dukes.
II. The Children's Year Campaign.....
.....By Dr. Adelaide Brown
III. Psychiatrical Problems of the War.....
.....By Dr. Jau Don. Ball

These papers were both timely and instructive and brought out an interesting discussion by Drs. E. N. Ewer. M. L. Emerson, Anna M. Small, Lieut. A. W. Stearns of the Navy, Major Hutchins, Captains Myers and Orbison of the Army, and August Vollmer, chief of police of Berkeley.

Dr. C. H. Miller of San Leandro, has been elected medical superintendent of the Alameda County Hospital.

The Alameda County Institutions' Commission filed its amended budget for the County Hospitals asking for $350,000 for the first unit of the proposed new hospital on the recently acquired site in East Oakland. It is proposed to build at once a service building for an ultimate building that will accommodate 250 beds, to cost $150,000; a surgery and an X-ray laboratory; dressing rooms and pathological laboratory, costing $50,000; surgical wards and corridors, to cost $50,000, and a medical ward with sixty beds to cost $50,000.

Announcement was made at the University of California to-day that Robert T. Legge, professor of hygiene, and university physician, has been commissioned a captain in the Medical Corps of the United States Army and will be stationed at the University Infirmary. The infirmary is being used as the hospital for the School of Military Aeronautics of the University. It will also be used by the Government, according to University officials, as the hospital for the Students' Training Corps to be established at the University, and designated as a semi-military institution.

The following members of the Alameda County Medical Association have entered the service: Drs. A. M. Smith, J. L. Lohse, H. G. C. Boge and E. S. Drucks.

CONTRA COSTA.

At the last meeting of the Contra Costa County Medical Society, Dr. U. S. Abbott, having been commissioned a captain in the Reserve Officers' Medical Corps of the Army, resigned the secretaryship of the County Society, and Dr. P. C. Campbell of Richmond was elected to fill the vacancy.

LOS ANGELES COUNTY.

Personals.

Dr. John C. Copeland has been commissioned captain in the Medical Reserve Corps. He is to go to Fort Oglethorpe, Ga.

Dr. A. Harrison Putnam, who was injured by an auto truck, will recover. He is suffering from a broken rib and from shock.

Dr. C. A. Johnson and wife left for Rochester, Minn., August 11, where Dr. Johnson, having been commissioned captain in the Medical Reserve Corps, will receive instruction under the Mayo brothers.

Film Folk to Build Hospital.

A Home and Hospital for Dependent and Ailing Members of the Motion Picture Industry is planned, demanding an immediate investment of $300,000 and occupying 60 acres of ground within an hour's ride of the city. It will be offered to the Federal Government as one of the chain of

great military hospitals being founded for the war's wounded. Its capacity will be 500 beds with arrangement for unlimited addition.

David Work Griffith is chairman of the executive board of the Motion Picture War Service Association, Mack Sennett is treasurer, and S. E. V. Taylor, secretary. Thomas Ince, Cecil B. de Mille, J. Gordon Edwards, William S. Hart, Jesse B. Lasky, Mary Pickford, A. S. Smith and Lois Weber are some of the directors. It will also serve as a vocational training school for blind and maimed soldiers and sailors.

Plan for Moron Home.

Dr. George Wallace, psychopathic expert of Wrentham, Mass., presented to the board of trustees a contour map and plans for a State institution for the feeble-minded. The plans provide for a 150-acre site, housing, psychopathic supervision, educational and industrial activities, supervised play and sports and a farm for 120 patients. The buildings are so segregated that all classes of morons, epileptics, delinquents, defectives and low-grade custodials may be supervised in distinctive groups.

180 Los Angeles Nurses on Firing Line.

Miss Edith S. Ryan, secretary of the Red Cross Nursing Service of this city, told of the heroic service of the nurses during the spring offensive when for four days and nights they never slept and never ceased working despite the persistent attacks on hospital after hospital.

Hospital Interns Ask Pay.

The twenty internes of the County Hospital at a conference with the Board of Supervisors, August 26, declared that the county should allow them something, that since their number had been reduced from thirty to twenty their work had increased and that they not only are called on to do work not of an educational character, but they have no time to earn anything outside of the hospital. At present they are given only their board and washing.

Bequeaths $5,000 to Medical Evangelists.

Mrs. Emilie Hill Scott of Santa Monica, who died August 15, bequeathed $5,000 to the College of Medical Evangelists, provided that $1,000 of the sum be used to endow a bed in the White Memorial Hospital, Los Angeles. The estate is estimated at $75,000.

For Women's Hospital.

An appeal by the Foreign Service Committee, civil and military, that a Los Angeles unit be sent to France by the Los Angeles American Women's Hospital Committee, resulted in reopening its subscription list to increase the fund from $22,000 to $50,000. The request came from Dr. Caroline Purnell to Dr. Louis Richter of the Los Angeles Women's Hospital Committee. Subscriptions will be taken at headquarters, 604 Citizens National Bank building.

Protest Negro Nurses.

The Board of Supervisors filed a protest September 3, on the second request from the white nurses at the County Hospital, that a stop be put to the employment of colored nurse students.

MARIN COUNTY.

Whereas, At the next general election Constitutional Amendment No. 26, which provides for the compulsory Health Insurance, will be voted on; and

Whereas, This amendment, if passed, gives the Legislature power to formulate Health Insurance laws of any nature whatsoever; and

Whereas, These laws proposed are indefinite, patterned after the German system, and tend away from democracy; and

Whereas, At the present time, with the high wages and absence of poverty among the wage earners of California such laws are unnecessary; and

Whereas, An expenditure of fifty millions of dollars will be required each year, and such an expenditure is entirely unjustified at this time when every dollar should be put forward to winning the war; and

Whereas, The sick, under this law, would not be privileged to choose his medical attendant but would be compelled to have treatment from a panel physician inadequately paid, let it be

Resolved, That the Marin County Medical Society, in regular session, go on record as unqualifiedly opposed to this form of Health Insurance and opposed to Amendment No. 26; and be it further

Resolved, That the members of Marin County Medical Society put forth every effort to enlighten the public on this alien amendment and expend every energy toward the defeat of this proposal.

L. L. STANLEY,
J. H. KUSER,
W. F. JONES,
Committee.

September 16, 1918.

MENDOCINO COUNTY.

The July meeting was held on the 27th in the office of Dr. Carol L. Sweet, Elk. On account of the season the attendance was very slim. The discussions, however, were to the point and very interesting. Various letters were read. After the meeting Mrs. Sweet regaled those present with a toothsome lunch.

The August meeting was omitted on account of the invitation for the members to attend—as guests—the meeting of the Pacific Association of Railway Surgeons, held at San Francisco on August 30 and 31. That meeting was a very interesting one, and its program of great import. It and the luncheons were enjoyed and appreciated by all the partakers. Those of the members of this Society who attended are very grateful to Dr. A. Miles Taylor and the P. A. of R. S. for the royal time accorded them. I must not omit to mention the special dinner given by Drs. C. O. Southard and Ethan H. Smith. That dinner will stay long in the memory of the partakers. We certainly all enjoyed ourselves to the limit. No wonder Dr. Taylor—in his invitation—promised us the time of our lives.

To the Medical Profession of Mendocino County:

Duty.

The call is coming, coming near,
For all of us to plainly hear,
That those of us who now steer clear
Must toe the mark, their burden bear.

The call is sounding in the air,
Alike to manly and the fair.
So do your bit, as laid out here,
Be it at home or "over there."

Do no shirking, have no cold feet;
Allow no person hear you bleat.
Be brave—like home upon the street—
When at the front you bullets greet.

Bright are the stars upon our sky,
For Volunteers, where bullets fly.
Do not hang back, for your place try;
Duty calls, don't shirk, don't ask why.

That call is coming, coming here;
Never minding what we hold dear,
To us now calling, do you hear?
No side-stepping, no steering clear.

OSWALD H. BECKMAN.

SAN DIEGO COUNTY.

P. A. Surgeon V. G. Clark, of the Navy, after several months of transport duty is home on leave recuperating. We join with Uncle Sam in hoping that he will shortly be quite fit again.

Dr. A. M. Lesem has succeeded to the superintendency of the Mission Valley Hospital, vice Dr. Joseph Weinberger, resigned.

Major H. Clifford Loos, M. R. C., is now on duty at Camp Kearney after a year's service at posts farther east. His many friends in the southern part of the state will be glad to greet him at the Base Hospital.

San Diego's new Tuberculosis Hospital is now giving service and every bed is filled. It will distinctly enlarge its usefulness to build an out-of-door camp, with funds recently bequeathed to the country for this purpose by private estate.

Dr. O. G. Wicherski is at present convalescing at St. Joseph's Hospital after recently parting with his appendix.

The San Diego County Society resumes its regular semi-monthly meetings Tuesday, September 10th, when it will be addressed by Major Harry M. Sherman, M. R. C., now stationed at Ft. Rosecrans. His subject will be the open-air treatment of surgical wounds. The second meeting of September will be given over to a further discussion of the proposed compulsory Health Insurance Act.

It is with deep regret that we chronicle the recent untimely death of Major William R. Ream, M. R. C., who came to his death while the machine in which he was making observations attempted to alight in a blinding rain storm somewhere in Illinois. Major Ream was one of the few medical men who have as yet qualified as aviators. He was deeply interested in the scientific side of aviation and its demand for certain physical qualifications necessary to its most effective performance. Our Society poet releases the following tribute to the memory of our departed brother:

O Soul Sublime, Brother Physician of Mine;
'T was not yours to only creep, content,
With feet on earth and duty in the skies;
Nor deterred you, the dangers to him that flies.
You, no earth bond could hold,
None other commanded; your only desire,
To be nearest where duty lies
And tend the hurt of your fold.

* * * * *

O Soul Sublime!
May I, like him, learn to fly
And if need be, die, to be near my goal.

H. F. A.

SAN FRANCISCO COUNTY.

During the month of August, 1918, the following meetings were held:

Tuesday, August 13th—General Meeting.

1. Some of the everyday problems of difficult labor. L. I. Breitstein.

2. Newer colloid-chemical studies and medicine. Martin Fischer.

Tuesday, August 20th—Section on Surgery.

1. A form of osteitis deformans simulating syphilis of the bones. S. H. Hurwitz.

2. Posterior dislocation of the inferior maxilla. Sol. Hyman.

Tuesday, August 27th—Section on Eye, Ear, Nose and Throat.

1. Presentation of pictures illustrating operative interference for paralytic strabismus. Hans Barkan.

2. Ocular complications of dengue with report of two cases. Hans Barkan.

3. Sociological and operative treatment of strabismus. Walter Scott Franklin.

TULARE COUNTY.

The regular meeting of the Tulare County Medical Society was held at the City Hall, Visalia, September 4th. A fair attendance listened with great interest to an exposition of the proposed Health Insurance measures to be recommended by the Commission to the next legislature in case the enabling amendment is carried at the fall election.

The Commission has gone into the fundamental questions of sickness as a cause of pauperism and deadbeatism exhaustively and believe that in this measure they will find a cure for more than 60 per cent, and medical experience justifies their conclusions. Details regarding the application of the cure necessarily will need further discussion and the thoughtful consideration of the medical profession.

The bi-county Tuberculosis Sanitarium at Springville is nearing completion.

Plans for a modern, strictly medical County Hospital at Visalia are being considered.

Drs. Chisholm and Fuller of Tulare and Todd of Porterville have entered U. S. service.

Social Insurance

Frequent reference has been made in the JOURNAL to Compulsory Social Insurance, and the advocates of this measure have been given such free opportunity to place affirmative arguments before our readers that we know all will be interested in reading the other side.

The League for the Conservation of Public Health has just issued a folder headed "IT SHALL NOT PASS"—that ably covers the chief points of controversy.

We herewith present it in full.

IT SHALL NOT PASS.

Shall California be the first State to pass Compulsory Health Insurance? On November 5, 1918, this question will confront you on the ballot as No. 20.

Under an attractive disguise, No. 20, Compulsory Social Health Insurance, is trying to gain admittance to its first American State. It has not the American password. It can not pass muster. It is un-American, undemocratic, unwholesome, unnecessary, unsound, unfair class legislation. It shall not pass. Vote no on No. 20.

1. What is Compulsory Social Health Insurance?

It is a dangerous device, invented in Germany, announced by the German Emperor from the throne the same year he started plotting and preparing to conquer the world.

The proposed law, under humanitarian disguise, would give a Social Insurance Commission arbitrary powers in California and make it superior to and not accountable to courts, executive or people.

2. Why does the Social Insurance Commission, despite persistent requests, refuse to tell the people of California before election, the details of the Compulsory Bill they propose to inflict on the taxpayers of our State?

Because the vast expenditure and the unlimited power of the elaborate political machinery necessary to operate this special class legislation would alarm the people.

3. Has Compulsory Health Insurance been investigated and adopted by any other American State?

Compulsory Health Insurance has been investigated by a number of States. All have refused it admittance as an alien to our shores and an enemy

to our free institutions. New York twice rejected this Compulsory Health Insurance device. The New Jersey Legislature also refused to adopt it, and Massachusetts, after a thorough investigation by two commissions, and with all the alleged facts procured by the Social Insurance Commission of California before it, recently rejected Compulsory Social Insurance in its Constitutional Convention by an overwhelming vote.

4. Are the statements, spread broadcast by the Social Insurance Commission, that sickness and destitution in California are increasing at an alarming rate, TRUE?

Such statements are deplorable and damaging—but not true. California is recognized as the Nation's health resort. Reckless statements to the contrary, based upon partial data, can only have the pernicious effect of reducing our valuable tourist trade.

Reliable statistics show that the average wage-earner in California loses but six days per year from sickness, in splendid contrast to the usual loss of nine days per year in other States. Climatic conditions, working conditions, housing conditions and general living conditions are also superior in California.

5. What will Social Health Insurance do to the working men of California?

It will form the precedent for Compulsory class distinction that will readily be followed by more obnoxious class regulations. In Compulsory Health Insurance we find reflected the sinister purpose of autocracy to establish a dependent class, and make that class dependent upon the arbitrary and compulsory rules of a governing class.

6. Was Compulsory Social Health Insurance proposed by Labor?

Certainly not. It was proposed and imposed upon the wage-earners of Germany by their imperial rulers.

Compulsory Social Insurance does not remotely deal with the equities of labor and wages. It specifically establishes a dependent class of wage-earners and offers to this dependent class poor relief instead of an increase in wages.

Mr. Samuel Gompers, President of the American Federation of Labor, expresses the attitude of those whom he represents as follows:

"The efforts of trade organizatons are directed at fundamental things; they endeavor to secure to all workers a living wage that will enable them to have sanitary homes, conditions of living that are conducive to good health, adequate clothing, nourishing food and other things that are essential to the maintenance of good health.

"In attacking the health problem from the preventive and constructive side, they are doing infinitely more than any Health Insurance could do, which provides only for relief in case of sickness, and yet the Compulsory law would undermine the trade union activity."

7. Will Compulsory Social Health Insurance impose an extra and heavier burden upon the taxpayers of California for the "good" of their health?

Yes. The enormous size of this "Compulsory Health Burden" is too heavy for the present treasury of the State to carry. The present total revenue of California is approximately $25,000,000. It would require twice this amount, about $50,000,000, to pay cash benefits, give medical, hospital, dental, special tuberculosis sanatorium benefits, etc., to a special limited class of wage-earners and their dependents—and to pay the operators of this Compulsory tax-eating machine.

8. Why is Compulsory Health Insurance called un-American?

Because it retains the characteristics of the land of its origin; it is fitted only to a paternal form of government,' where there is discrimination against the dependent classes, and the governing class dominates through class legislation; it is an arbitrary system of taxation hostile to American principles.

9. Will Compulsory Health Insurance prevent those afflicted with tuberculosis, syphilis, and other chronic diseases, who now reside in various States, from flocking to California to participate in the benefits of this system?

No. As "there will be no medical examination prior to insurance" (according to our Social Insurance Commission) the people of the State can expect all the chronic sufferers, capable of working some part of the time, to take up their residences here as soon as the bars are lowered by Compulsory Health Insurance.

10. Will Compulsory Health Insurance preserve the existing sacred, confidential relations between the physician and his patients?

No. All the ailments, sickness or deformities of the wage-earner or his family will necessarily become part of the public records.

11. Will Compulsory Health Insurance, under the proposed amendment, preserve the inalienable rights and individual liberties of the citizens of this State?

No. The Compulsory Health Commission provided for, holding all power—legislative, executive and judicial—will make you do what "panel" or State doctors decide you ought to do for the general health.

12. Is Compulsory Social Health Insurance an essential war activity?

It may be in its Vaterland, but not in America. All our time, talent and treasure must be exclusively devoted to winning the war. The increasing demands of our boys and Allies, who are fighting the battle of democracy, make the practice of public and personal thrift our patriotic duty, and any indulgence in undemocratic expensive experiments must be checked.

13. What constructive policy for the Conservation of the Public Health do our foremost American health authorities advocate?

A policy devoted to all the people, not to special classes. A policy based upon scientific facts and not dependent upon foreign fads or fiction. **More than 60 per cent. of disease is preventable.**

The practical preventive policy produces permanent results for all. The impractical sickness relief policy of Compulsory Health Insurance would permanently burden the many for the temporary relief of the few.

14. Has this American policy for the Conservation of Public Health, which is so diametrically opposed to the foreign system of Compulsory Health Insurance, demonstrated its superior effectiveness?

Yes; decisively! In the titanic test of the world conflict, in the industrial fields, on land and sea, and in the air, American effectiveness is winning daily triumphs over so-called German efficiency.

15. What are we fighting for "Over There?"

We are fighting for our American birthright—principles of equality and personal freedom—inalienable rights, that we must not forfeit here for this mess of German pottage—Compulsory Social Health Insurance

16. Is the enactment of Compulsory Health Insurance essential for the improvement of our Workmen's Compensation Laws?

No. Compulsory Health Insurance differs radically from the purposes of Compensation. Workmen's Compensation laws have now been enacted in thirty-seven States, three Territories and the Federal Government—Compulsory Health Insurance has been adopted by none, but uniformly rejected by each State that has considered it. Workmen's Compensation laws aim to provide reasonable indemnity for the loss resulting from personal accidents, which are recognized as inherent incidents and risks of industry. Injuries which occur out of and not in the course of employ-

ment are not included in Workmen's Compensation Laws. Injuries due to intoxication are not covered.

Compulsory Health Insurance, however, would not only award its benefits to the wayward worker who became ill though lax living, secret vices or intoxication, but even if his whole dependent family imitated his vicious example, all of his dependents would be included and given the same indulgent care. The sober taxpayers would pay the bill.

17. Can the Commission guarantee "specialist care" and free choice of Doctor to the individual worker?

No. The insured worker would be limited to the services of the "panel" physician he has selected. His choice would necessarily be further limited to those doctors who are anxious to join the State "panel" and have their compensation fixed by the commission. A system of optional choice, to be effective, would have to place all the doctors under compulsory control. Only that variety of "specialist" who solicits contract practice would care to give special care for $1.00 per year. In England only the attendance of an "ordinary practitioner" is guaranteed.

18. Will the burden which sickness and disability now impose upon the Nation be relieved by Compulsory Health Insurance in California?

No. But California, instead of being the Nation's health resort, would quickly become a malingering resort for the Nation's sick. Sickness travels from State to State and its results are nation-wide. The question in its larger aspects is national and not local. To adopt a policy of Compulsory Health Insurance on partial data and "assumptions, arbitrary and crude," is dangerous. A comprehensive health survey by a National Health Commission pursuing a preventive, constructive program under the authority of the Federal Government, would economically, systematically and thoroughly deal with the problem of the Conservation of Public Health.

Statement issued by General W. C. Gorgas, Surgeon-General, U. S. A., September 15, 1918:

"The medicine of larger and higher scope is passing perceptibly out of the ordinary bedside phase of diagnosis and treatment to the state in which the little ounce of prevention is at last recognized as bettering the pound of cure."

LEAGUE FOR THE CONSERVATION OF PUBLIC HEALTH.
San Francisco.

Military News

A MESSAGE.

Each day every American soldier in France is confronted by a great duty. Our army there has a great task to perform for our country, for the world, for civilization, and for humanity. Our soldiers are doing their duty with a courage and fidelity and efficiency that thrill every heart.

Each day every American citizen at home is confronted by a great duty, a duty as imperative upon him or her as the duty of our soldiers is upon them. The American people have a great task to perform. It is to support to the limit of their ability our army, our navy, our country at war.

To work with increased energy and effieieney so that our national production may be inereased; to economize in consumption so that more material and labor and transportation may be left free for the uses of the Government; and with the resultant savings to support the Government financially is the daily duty of every Americaan. It is a duty that will be met by every American whose heart is with our soldiers in France, who glories in their courage and fighting ability and their success.

DEATH RATE FROM DISEASE IN AMERICAN ARMIES.

A health rate, which as far as known has never been surpassed, has been established by the American armies both here and overseas. For the week ended July 26 the combined reports of the American Expeditionary Forces and of troops stationed in the United States show an annual death rate for disease of 1.9 per 1,000—less than 2 men per 1,000 per year. The annual death rate for disease of men of military age in civil life is 6.7 per 1,000.

This new rate is based on an approximate strength of 2,500,000 men, and includes men living under abnormal conditions. The overseas record was made while American soldiers were participating in the heavy fighting in the Marne salient, when they were frequently compelled to sleep and eat under the most primitive conditions.

That this record is truly representative of the general health of the troops is shown by the combined reports, which indicate the figure of 2.8 per 1,000 as the average death rate for disease during the past two months.

An idea of the progress being made in military sanitation is gained by a comparison with the following:

During the Mexican War the annual death rate for disease was 100 per 1,000. During our Civil War the rate in 1862 was 40 per 1,000, while during 1863 the rate jumped to 60 per 1,000. The disease death rate for the Spanish-Americaan War was 25 per 1,000.

As far as available records show, the lowest figure heretofore recorded was 20 per 1,000 during the Russo-Japanese War.

Notices

COLLOQUIA.

Colloquia for physicians will be held at the San Francisco Hospital on Thursdays at 9 a. m., in the Surgical Amphitheater, on Surgery and the Surgical Specialtics, and on Saturdays at 9 a. m. in the Medical Amphitheater, on Medicine and the Medical Specialties. All physicians who are interested are invited to attend.

The following are the lecturers for the month of October:

Surgery.

October 3—Dr. Emmet Rixford.
" 10—Dr. J. R. Dillon.
" 17—Dr. H. A. L. Ryfkogel.
" 24—Dr. Leonard W. Ely.
" 31—Dr. Leo Eloesser.

Medicine.

October 5—Dr. H. P. Hill.
" 12—Dr. W. F. Schaller.
" 19—Dr. H. H. Yerington.
" 26—Dr. H. E. Alderson.

Very truly yours,
W. OPHÜLS,
Dean, Stanford University Medical School.

NOTICE TO PHYSICIANS.

You are hereby warned against one "Dr. Mann," who upon September 23, 1918, called upon Dr. S. S. Bogle of Santa Rosa and Dr. Jas. W. Sewall of Healdsburg, collecting from eaeh $2.00 and offering his watch as security in both cases. He elaims to

be suffering from diabetes; states that he is a student of Dr. Sayre. His description is as follows: Between 45 and 50 years of age; height, nearly 6 feet; about 170 pounds; smooth shaven; upper front tooth gone; speaks with a foreign accent. He claims that Dr. A. Miles Taylor and Dr. Emmet Rixford of San Francisco sent him to Sonoma County; gives the story of having a sick wife.

State Board of Health

August Meeting.

The regular meeting of the California State Board of Health was held August 3 in Sacramento. There were present Dr. George E. Ebright, president; Dr. F. F. Gundrum, vice-president; Dr. W. H. Kellogg, secretary; Dr. Edward F. Glaser and Dr. Adelaide Brown.

A Bureau of Child Hygiene was created to be presided over by a director to an appointed by the board.

The resignation of Mr. L. B. Mallory, assistant to the secretary, was accepted, and Mr. Guy P. Jones was appointed to fill the position.

Upon the recommendation of the director of the Bureau of Tuberculosis, the subsidy for twenty beds in the Los Angeles County Hospital was restored, and the action of the secretary in restoring the subsidy to the Tuberculosis ward of the Sacramento County Hospital, effective July 15, was approved. Similarly, acting upon the recommendation of the director of tuberculosis, the board restored the subsidy to fifteen tuberculosis beds in Ward 8 of the San Francisco Hospital, effective August 3.

Acting upon the report of the director of the Bureau of Tuberculosis, the board decided to take up with the surgeon general through the proper channels the matter of making provision for many tuberculous soldiers discharged from army camps who are coming to California, making their care very difficult because of lack of facilities.

Miss Mary B. Eyre was appointed assistant inspector of Schools of Nursing, effective October 1.

Upon resolution of the board, graduate nurses from accredited schools in Utah are admitted to registration in this State without examination, upon complying with the rules and regulations of the board.

Upon the recommendation of the director of the Bureau of Sanitary Engineering, a temporary permit to supply water to its residents was granted to the city of Imperial.

Temporary permits to operate swimming pools were granted to H. A. Hamilton, Saratoga Springs Baths, Bachelor, Lake County, and to the Pacific Electric Railway Company, Los Angeles.

Upon the recommendation of the director of the Bureau of Sanitary Engineering, a permit, under certain conditions, was given to the East Bay Water Company to supply water for domestic purposes to the East Bay Cities.

A permit, under certain conditions, was granted to the city of Martinez to dispose of its sewage into Alhambra Creek, and the sewage of the Fairview section into the adjoining slough.

Licenses to operate cold storage warehouses were granted to the following: Central Cold Storage Company, San Francisco; Central Cold Storage Company, Eureka; Chico Ice & Cold Storage Company, Chico; San Joaquin Ice Company, Fresno; The Union Ice Company, Stockton.

A large number of food and drug cases then came before the board for hearing.

September Meeting.

The regular meeting of the State Board of Health was held at Sacramento on September 7. There were present: Dr. George E. Ebright, president; Dr. F. F. Gundrum, vice-president; Dr. Edward F. Glaser, Dr. Adelaide Brown, and Dr. W. H. Kellogg, secretary.

Leaves of absence for the period of the war were granted Stanley B. Freeborn, consulting entomologist, Bureau of Communicable Diseases; Robert N. Hoyt, State district health officer, Central Coast district, and to Frank Bachmann, chief chemist and bacteriologist in the Bureau of Sanitary Engineering.

Upon the recommendation of the director of the Bureau of Social Hygiene, Miss Elizabeth McManus was appointed social service director in the bureau.

Upon the recommendation of the director of the Bureau of Tuberculosis, sixty beds in the San Diego Tuberculosis Hospital were placed upon the eligible list to receive subsidy from the State.

Upon the recommendation of the director of the Bureau of Sanitary Engineering, a permit was granted to the city of Newport Beach to construct sewerage and sewage disposal plants under certain specific conditions; the cities of Covina and Azusa were granted temporary permits to supply water for domestic purposes from the San Gabriel River; a permit was granted to the city of Martinez to make certain proposed changes in the city sewer system under certain specific conditions. Temporary permits to operate swimming pools were granted to the Western Meat Company of San Francisco, and to J. T. Morehead to operate the Modesto Baths. A permit to operate the Meadowbrook Swimming Pool was denied to the city of San Bernardino.

Permits to operate cold storage warehouses were granted to twenty-eight warehouses, scattered throughout California. The regular hearing of food and drug cases was held before the board.

W. H. KELLOGG, Secretary.

Department of Pharmacy and Chemistry

Edited by FELIX LENGFELD, Ph.

Help the propaganda for reform by prescribing official preparations. The committees of the U. S. P. and N. F. are chosen from the very best therapeutists, pharmacologists, pharmacognosists and pharmacists. The formulae are carefully worked out and the products tested in scientifically equipped laboratories under the very best conditions. Is it not plausible to assume that these preparations are, at least, as good as those evolved with far inferior facilities by the mercenary nostrum maker who claims all the law will allow?

For many years practically all manufacturers of biological products have been supplying Boards of Health with special packages of diphtheritic antitoxins at greatly reduced prices. The difference between this anti-toxin and that ordinarily sold has always been a mystery to the ordinary practitioner. He felt that if the Board of Health anti-toxin is as good as the other, there is no reason for the great difference in price. If, on the other hand, it is not as good, it should not be used. Lately many of the manufacturers have

placed on the market this Board of Health package to be sold indiscriminately at a greatly reduced rate and it certainly seemed of interest to ascertain the exact difference, if any, between the two anti-toxins. Accordingly, three large manufacturers were written to, asking for this information. Their answers left much to be desired. From these answers we learn that the difference in price was originally made because the Board of Health anti-toxin was purchased in very large quantity and was not returnable and, besides, the manufacturers felt that they were doing a public duty in bringing anti-toxin within the reach of every community no matter how poor, even if this entailed an actual loss. As a few firms insisted on placing this Board of Health anti-toxin on the market, others followed, so that the original reasons could hardly hold. The difference between Board of Health and regular anti-toxins seems to be very largely a difference in the volume of the dose, not in its strength. Anti-toxin from different horses varies in strength and it is not practical to concentrate beyond a certain point, therefore the more concentrated is sold as the regular anti-toxin and the less concentrated as Board of Health anti-toxin. There seems to be no definite experiments to determine whether concentration is of any great importance. It is claimed by some that the larger volume injected means a greater tendency to serum sickness and that, therefore, it is advisable to use as small a volume as possible. However, there seems to be no sharp line of demarcation between the Board of Health anti-toxin and the regular anti-toxin but rather a movable standard dependent upon the relative demand for the two. Recognizing the difficulty of maintaining this difference which, at best, seems to be largely artificial, one of the most prominent houses now furnishes diphtheritic anti-toxin in only one style package and this is sold at the price formerly charged for the Board of Health package. If this course is generally followed it will make diphtheritic anti-toxin very much cheaper; it is a question, however, if this is altogether a step in the right direction. It is claimed that with the privilege of replacement and the high cost of distribution diphtheritic anti-toxin will be sold at cost, even at a loss to the manufacturer, and this will, undoubtedly, result in a poorer quality for there is no great inducement to improve a product whose sale is attended with loss. Time alone, apparently, can solve the problem to the satisfaction of all concerned.

Syphilidol is but one of the many preparations offered to physicians as improved substitute for arsphenamine. Every physician knows that salvarsan and neosalvarsan were not perfect, and hopes for something better. However, the improved substitutes will come as the result of careful scientific experiment and will be carefully tested before being offered to the profession. In the meantime the physician should avoid being exploited. Syphilidol is put up in ampoules and in tablets. It claims to be a preparation of arsenic, antimony and silver. The Council on Pharmacy and Chemistry found the tablets to contain ¾-gr. Mercury Protiodide and the ampoules to contain less than 1/5000-gr. Arsenic. Some nostrum makers are taking advantage of the growing friendship for France by advertising preparations said to be largely used in French clinics. Many of these claims are altogether false and the physician should accept them with many grains of salt.

Recent work seems to indicate that the poisonous effects of Arsphenamine are sometimes due to the use of too little alkali in preparing the solution. On the other hand, too much alkali seems objectionable causing deterioration of the vein walls. Toxic effects may result from giving the injection too rapidly and it has been suggested that small doses be given first and thus gradually lead to toleration.

New Members

Meads, Romilda P., Berkeley.
Boge, Harry G. C., Oakland.
Grissim, John D., Oakland.
McAllister, Oscar O. T., Oakland.
Small, Anna M., Oakland.
Troutman, Holmes F., Pleasanton.
Krone, Carl R., Oakland.
Hill, W. H., San Francisco.
Jones, Robert A., San Francisco.
Laughlin, C. B., San Francisco.
Watanabe, J., Los Angeles.
McCoskey, Grace, Stockton.
Edwards, S. R., Stockton.
Hoag, Ernest B., Los Angeles.
Johnson, B. W., Fresno Co.
Parrish, Frederick W., Dos Palos.
Wood, Lorin F., Point Loma.
White, Arthur H., San Francisco.
Bransford, S. G., Suisun.
Jenny, Warren C., Vacaville.

Resigned

Burkard, Adrian F., Santa Barbara.
Gould, F. S., Montecito, Cal.
Peterson, Edwin A., Vallejo.

Deaths

Phelps, Carl Elton, a graduate of the College of Medicine, University of Southern California, 1906; died in Los Angeles July 15, 1918.

Kingsley, T. H., a graduate of the University of California, 1886; died in Bakersfield, Cal., June 28, 1918.

Abbott, Edwin K., of Salinas, Cal., died June 11, 1918; was a Fellow of the A. M. A. and a Civil War veteran.

Morrill, Augustus Lincoln, graduate of the University of California, 1887; died in Antioch, Cal., June 23, 1918.

Hopkins, Thos. P., a graduate of the University of California, 1880; died in Potter Valley, Cal., first part of July, 1918.

Boynton, Sumner H., of Los Angeles, a graduate of Hahnemann Medical College, Philadelphia, 1866; died August 2, 1918; age 72.

Douglas, Chas. H., a graduate of Bellevue Hospital and Medical College, New York, 1876; died in Los Angeles August 8, 1918.

Stephens, John Miller, Pasadena, Cal., was killed by the overturning of his automobile near Santa Maria, Cal., July 10, 1918; was a member of the Medical Society, State of California.

Putnam, C. B., a graduate of Missouri Medical College, 1883; died August 4, 1918, age 57, in Napa, Cal.

Nixon, Anne W., a graduate of Cooper Medical College, San Francisco, and a member of the Medical Society State of California, died in Pasadena, California.

Ream, Wm. Roy, San Diego, Calif., a graduate of Sioux City College of Medicine, Iowa, 1902. Licensed in California, 1914, was killed by fall of aeroplane near Effingham, Ill., August 24, 1918.

Brown, Ira E., a graduate of the University of Southern California, 1904, died in Los Angeles August 13, 1918.

Lephakis, John, 233 Post street, San Francisco, a graduate of the University of Athens, Greece, 1899. Licensed in California, 1912. Died in San Mateo County, on the Crystal Springs Road, August 30, 1918.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn.....Dr. W. H. Walker, Willows
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin.....Dr. W. F. Jones, San Rafael
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa.....Dr. Robt. Crees, Napa
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. A. V. Doran, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI NOVEMBER, 1918 Number 11

INFLUENZA.

Epidemic influenza has reached the Pacific Coast in its pandemic progress from eastern Europe around the world. It is doubtless the same disease which appeared in pandemic form in 1889-1890, and previous to that, at more or less regular periods for many centuries. Its specific cause is unknown, although the name "influenza bacillus" was attached by Pfeiffer in 1892 to a certain organism found in the nasal and bronchial secretions. This bacillus is found in only a minority of cases in the present epidemic. It has been found in the highest percentage in naso-pharyngeal swabs, and has been isolated also post mortem in pure culture from pneumonic lung tissue. Various other organisms have been found associated with the present outbreak, especially a gram-positive pleo-morphic coccus, tending to grow in chains and to produce involution forms. It is believed that a filterable virus can be excluded. Secondary pneumonias have yielded pure cultures of pneumococci, Pfeiffer's bacilli and streptococci. Blood cultures are uniformly negative.

Epidemic influenza, to use the Italian term, or la grippe, after the French, is characterized now as previously, by the extraordinary speed of its spread, this being, however, no more rapid than means of human conveyance, and by the high percentage of the population attacked. In Spain 30 per cent. of the population are reported to have suffered from the disease. Previous epidemics have attacked as high as 40 per cent. of the population. Thus far from 10 to 15 per cent. of the cases have been complicated with pneumonia, to which most of the fatalities are due. Approximately one-third of the pneumonias prove fatal, although there is reason for believing that this mortality will be lower in California.

While one attack does not confer immunity, the individual seeming possibly even to be more susceptible, it is nevertheless true that the great majority of the present cases are under 30 years of age. In other words, this epidemic flourishes principally among those persons who were born after the pandemic of 1889-1890. This, like preceding epidemics, has a definite sporadic onset associated with carriers from the infected zone, a period of increase to a peak, with a gradual subsidence, the average epidemic duration being six to eight weeks. Its death rate, aside from complications, is characteristically low, in this, as in high morbidity, closely resembling dengue. Earlier reports from the army in France cataloged the disease as "three-day" fever, a term ordinarily applied to a more or less indeterminate group of fevers related to sand-fly fever, or "dengue-like" fevers. There is, however, no question of an insect carrier in influenza as the disease is definitely contagious and transmitted directly by droplet infection.

The onset is usually sudden with severe general pain, especially in the back, head, chest and limbs. Vomiting and epistaxis are frequent. Weakness and prostration are marked from the first. Anorexia and insomnia are characteristic, although in the first two days the patient is often semi-stuporous. The temperature is irregular between 100° and 104°. Some cases show a flat course at 102°, for instance, lasting three to five days, with abrupt termination. With extreme aching, soreness and prostration, some cases have a fever not exceeding 100° and often little above 99°. The more common type is a rise to 103° or 104° or more with slight remissions for from one to three days, and then an irregular decline, often with exacerbations after a day or two of normal temperature.

The pulse is usually slow as compared with the

fever and the respiration rate normal. Moderately inflamed tonsils are often seen and a definite but minor percentage have moderate conjunctivitis and photophobia. Dry, reddened pharynx, with aching throat, is frequent. A slight rhinitis usually follows in a few days but is seldom pronounced. In the California cases thus far cervical adenitis is rare. A leukopenia is characteristic and a white count over 8-10000 suggests a complication or wrong diagnosis. Many severe cases have less than 4000 leucocytes. Even in secondary pneumonia, the leucocytes are usually low. The urine shows only the manifestations due to fever. Epistaxis is a prominent feature in many cases, with occasional hemorrhage from the bladder or bowels. Occasional cases show a definite gastro-intestinal localization, with intractable vomiting, diarrhea, and more or less colic. Meningitic symptoms are rare.

The incubation period is not definitely known, probably ranging from one to four days. The significance of carriers and the development of acute influenza in carriers, are likewise undetermined. It is possible, as in cholera, that a carrier may remain healthy until some local exciting disorder determines the onset of the specific disease. Thus in cholera, a carrier may develop an acute choleraic lesion under the influence of a non-specific diarrhea or gastro-intestinal irritant, chilling, fatigue, etc. Such a supposition would explain why influenza so often follows an ordinary coryza, acute bronchitis, fatigue, chilling, etc.

No specific treatment for influenza is available, but because of the near-hysteria attending the popular interest in this epidemic, numerous sure-cures are receiving publicity in both medical and lay circles. Physicians should be conservative, yet open-minded, on this subject. Indiscriminate experimentation on patients should be severely condemned. Here is a striking example of where animal experimentation would be of the utmost value except that, unfortunately, influenza cannot thus far be induced in animals.

The most successful symptomatic treatment centers in the use of salicylic acid. A good method of administration is such a formula as follows:

℞—Acid acetyl salicylic	.2
Acetphenetidi	.1
Sod. bicarb.	.1

Such a capsule given each 1 to 4 hours.

The antipyretic, analgesic and disinfectant action of salicylic acid seems of particular value here. Sodium salicylate in 5 gram doses, with 0.5 gram sodium bicarbonate, given in 10.cc. distilled water intravenously, has been highly extolled, but does not seem to offer definite advantage over oral administration as a routine.

The bowels should be kept free with salines and an abundant fluid intake insured, amounting to at least 2500 cc. daily. Lemonade with 2 tsp. lactose and ½ tsp. sod. bicarb. makes a pleasant and effective drink. Rest in bed with abundant sunshine, fresh warm air, and good nursing are extremely important for quick recovery and avoidance of complications. Hydrotherapy has not been of material assistance, the higher temperatures proving very resistant. Spraying of mouth, throat and nose several times a day with 1:1000 quinine bisulphate solution containing an equal quantity of menthol, seems of distinct benefit. A clean mouth is imperative. For the racking cough and soreness in the bronchial passages, ipecac has given benefit. It can be prescribed as capsules of powdered ipecac, .065 gram each, three or more times a day. If the cough is more severe, Dover's powder in small repeated doses, is effective. Sometimes ammonium chloride inhalations, or in solution by mouth, or inhalations of benzoin and eucalyptus with a modicum of menthol, give marked relief.

As fast as the patient's appetite allows, the diet should be increased in caloric content, an effort being made to supply a minimum of 2500 calories daily. The diet list may include such articles as the following: Whole milk, one quart; cereal, lactose custard, gelatin jelly, toast, butter, cream, eggs, six to eight daily, best as eggnogs, malted milk, ice cream. Feedings should be each three hours. Abundant fruit juices, carbohydrates and alkali are important.

The development of complications should be watched for closely. Pneumonia, otitis media, bronchitis, and cardiac weakness should be treated secundum artem. A daily chest examination is important to detect local congestion, which occurs chiefly in the bases and more on the left side. "Migratory pneumonia" is of frequent occurrence. Diagnosis should not await definite dullness. Leucocytes, temperature and respiration often remain low in the presence of a beginning broncho-pneumonia. The pulse, too, may give no index of pneumonic development. The pneumonia may become frankly lobar, but as a rule is of a lobular or broncho-pneumonic type. At autopsy what clinically seemed a lobar lesion, often proves to be a massive almost miliary broncho-pneumonia, involving from one lobe to all of both lungs.

Prophylaxis is of the utmost importance. Absolute quarantine will prevent introduction of influenza. No definitely effective vaccine or serum is yet available. In the care of patients in hospital, cubicle isolation is easily secured by stringing wires six feet from the floor between all beds and from these hanging sheets by means of heavy paper clips. Head sheets are not necessary and if the footboards of the beds on opposite sides of the ward are more than ten feet apart, foot sheets are unnecessary. Doctors, nurses and attendants should wear caps, gowns and gauze masks. The last should have four layers of gauze and cover nose and mouth with a wide margin. Five by eight inches is a good size. They should be changed at least once per hour and disinfected in 5% liquor cresolis comp. or equivalent before being washed and dried. As in pneumonic plague, droplet infection is the chief method of conveyance, and therefore most to be guarded against. Hands should be carefully washed with warm water and soap before touching any part of the person unprotected by cap and gown. Dishes should be sterilized by boiling or immersion in 5% liquor cresolis comp. Toilet or other soft paper should be used in place of handkerchiefs and after use should be deposited in paper sacks

pinned to the bed within easy reach of the patient. These should be burned daily. Pasteboard sputum cups should contain ¼ inch 5% liquor cresolis comp. and be changed at least daily. Disinfection of stools and urine is unnecessary. For personal prophylaxis, Dr. Sanford Blum of San Francisco urges the use of potassium iodid or syrup of hydriodic acid, in small repeated doses.

Prophylaxis should include sufficient sleep, rest, open air and sunshine. Crowded street cars and indoor gatherings of all sorts must be eschewed. Sneezing or coughing without the face protected by a handkerchief is a sanitary crime. Spitting should be similarly repressed. Gauze masks should be worn in public by all persons where influenza is epidemic.

THE PSYCHOPATHIC HOSPITAL IDEA.

One of the institutions badly needed by California, and especially by the community in and about San Francisco, is a Psychopathic Hospital, and the medical profession as a whole should interest itself in the effort now being made to obtain such.

The functions of such a hospital are many, important among them being, first of all, to serve as a nucleus, about which a rational program for the state care of those with nervous or mental disease or defect, can be built. To be sure, each institution should be a center of psychiatric activity for its own area, but there should be a center of centers, from which should emanate scientific inspiration, and co-ordinate plans as well as trained assistants to supply other institutions. By concentrating certain state-wide functions in such an institution many things can be more adequately and economically accomplished. Furthermore, by being located in the city, it serves as a first line of attack against the problem of disease, thus bringing early and borderline cases to the attention of experts. This is especially true of its Out-patient Department, where large numbers of cases may be seen which would otherwise get to a state hospital too late for benefit. Its social service department would supply a long-felt want. Finally, as an educational center both for students, practitioners and the laity, it is the first move toward rational, preventive medicine and mental hygiene.

However, the time has long since passed when it is necessary to enumerate arguments in favor of a Psychopathic Hospital. That one is an absolute necessity is a truism. At present the only argument against its immediate erection is the expense. Surely, a rich, self-conscious state like California will not lag behind and allow this need to continue unmet. The thousands of dollars now spent by courts, social agencies, schools, charitable organizations and hospitals in trying to solve these problems of the psychopathic individuals would more than build and maintain a Psychopathic Hospital.

NEWSPAPERS AND THE DOCTOR.

How the average newspaper does enjoy poking fun at the doctor! And how often it slurs him and his work, and by innuendo and unrefuted misstatement allows him to suffer injustice! Such, doubtless, is to be expected and as a general thing arouses only amusement at the expense of the newspaper. As, for instance a San Francisco paper recently published an editorial suggesting that much well-intended medical enterprise is misdirected as promoting disease by advertising it. Of course the fallacy of such a statement is self-evident, except, apparently to its sapient author. It is of record that non-medical persons with a prurient regard for medical literature, have died of a misprint. Others, too, assuming the practice when they were ignorant of the theory, have died of a wrong dilution and of taking it internally instead of by inunction of the skin.

Such instances, doubtless, afford the thoughtful editor quoted above, full justification for holding the medical profession entirely to blame. As Dr. Rucker once said, the child dead of whooping cough is just as dead as if he had died of diphtheria. It is a matter of indifference to the tubercle bacillus whether his victim be Eddyite, Christian, Greek or barbarian, gutter-snipe or man of destiny, so long as he finds the soil favorable and his growth unchecked. Not advertising the disease will not eliminate it, as has been amply demonstrated in the past. The deaths above 1 to 10,000 cases of influenza may be due entirely to fear, as certain Eddyites proclaim, but the persons involved are just as dead as if the pathologic lesions of the autopsy table were really responsible for the death.

Why should newspapers disregard the proved facts of science and the tested good judgment and sound desire of the great majority of their readers? Do they imagine that good comes from such specious chatter? Or are they trying to cater to some small clique with a private grudge, and dare not boldly state their true position?

Along with the above might be noted in the same newspaper quoted a half-column squeal from a self-styled physician inveighing against the injustice and chicanery of the State Board of Medical Examiners ,for having refused him, and many like him, license to practice medicine in California. Of course he neglected to say that the Board of Medical Examiners has as its one function, in law and practice, not the protection and aggrandizement of physicians, but solely the protection and welfare of the public, and is created by and responsible to, that public. Also the aforenoted newspaper, not only printed no suggestion of repudiation of the outrageous indictment brought by this disgruntled black sheep, but apparently concurred in his diatribe, even heading it with large display type.

Some day newspapers of the west will so far value science and its contribution to life, and will so enhance their appreciation of newspaper fact, and will so correctly value the taste, desire and mentality of their readers, that they will imitate certain of the great eastern dailies, which have a well-trained medical staff member to edit their medical and scientific news and editorials.

VOLUNTEER MEDICAL SERVICE CORPS.

Some misunderstanding has arisen of late regarding the status, function and usefulness of the V. M. S. C. In another column will be found a condensed and complete statement of the reorganized corps. This should be read with attention by every physician not in the army, the navy

or the U. S. Public Health Service. It can be made an important factor in our war program. Membership is strongly recommended.

It must be made clear that the Volunteer Medical Service corps is a volunteer organization which has for its object the enrollment and classification of the profession. Its members are entitled to wear an insignia which will clearly indicate that they have offered their services to the government, when such services are needed. Patriotism cannot be created by coercion. It also must be made clear that the Volunteer Medical Service corps has for its primary object, furnishing its classification to the army, the navy, the Public Health Service, the Red Cross and provost marshal, as well as to civilian institutions and communities, as a guide in providing for their needs to the best advantage.

The object of the corps is not to disturb any medical man in the performance of any duty to which he has been assigned by any governmental agency either for service at the front or at home.

We must recognize clearly that winning the war is our one great ambition in life, and that, until that end is fully accomplished, nothing else can claim our first attention. Here is an approved means, endorsed by the President and the government, whereby every physician not in the military, may place his service most advantageously in the present crisis.

THE COMMUNAL KITCHEN.*

Pressure of food conditions due to the war has led to widespread employment of communal kitchens in European countries. England has this year established national kitchens, under the Director of the Communal Kitchens Section of the Ministry of Food. Late in March there were 250 kitchens with the probability that inside of two months the number would increase to 1,000. The Ministry of Food seeks not so much the relief of any one class, as to effect a national economy in fuel and foodstuffs. Even with a minimum of waste in private kitchens, and in many the waste is still excessive, a considerable economy results from the use of one centralized kitchen.

The use of the communal kitchen has passed the experimental. To be successful it must avoid the slightest suspicion of charity, must be supported by an educated public sentiment, must be attractive to the public, must cater to tastes and prejudices of patrons, and must offer better value than the private kitchen. It should utilize existing agencies and apparatus so far as possible, as school kitchens and institutional plans already provided with steam appliances. Among its distinct contributions, aside from better food at lower price, are its convenience and time-saving features.

In England communal kitchens are operated on two plans. In one the food is dispensed from the central plant direct to purchasers. In the other, the food is distributed to a number of retail branches. This latter allows greater centralization with consequent saving in buying supplies, in labor and necessary expert supervision. The nature of the menu is governed by two considerations, the one requiring dishes which can be prepared with the least variety of appliances, thus reducing labor cost, and the other requiring dishes which can be warmed over.

One successful London kitchen supplies 6,000 customers weekly, representing 12,000 to 15,000 persons. Here it is necessary to sell at lowest prices possible and a simple menu is offered, consisting of soup at 2 cents, a meat course at 6 cents, or a substitute on meatless days at 4 cents, one vegetable at 2 cents, and a dessert at 2 cents. Here the meat is usually in the form of a pie. In other cities, where there was less necessity for keeping the cost so low, more varied menus are provided. Such a typical menu is as follows:

Scotch broth	3 cents
Fish roll	4 "
Vegetable pie	4 "
Minced meat	8 "
Roast meat	10 "
Potatoes	2 "
Parsnips	2 "
Ginger pudding	4 "
Plain pudding with sauce	4 "
Baked rice pudding	3 "

Here the customers provide their own receptacles for taking food home. In most cities the average price of a dinner is 14 to 16 cents, in some cases being as low as 10 cents.

Reports from Austria and Germany show that communal kitchens have a considerable vogue. In December, 1917, it was estimated that in Germany one-fourth of the population in cities over 10,000 used communal kitchens, and in cities over 500,000 one-third used them. The Scandinavian countries and Holland also have turned to communal kitchens as a war measure.

With the evident theoretic advantages and with the successful operation of an increasing number of communal kitchens, it seems probable that this institution will survive the war as a definite and valuable factor in community life. The present trend of the servant problem, the increasing interest of women in extra-mural activities, the time and labor-saving qualities, will all prove powerful factors in making the system permanent.

It is interesting to note that the communal kitchen has met with practical success also in New York and environs. Here a standard dinner is served for fifty cents, with other menus more expensive. The food is delivered in aluminum containers with hollow walls, which nest together and are fastened by a clamped cover. Hot dishes are clamped together, and cold dishes together. The nests are delivered to the house, accompanied by the menu for the succeeding day. This menu is marked with the articles desired and placed in the empty container together with money or coupons, and collected later in the day. All containers are washed at the central kitchen. Such a central station costs from $15,000 to $20,000 to equip and open. This sum is raised by the people in the district who buy 6% shares at $100 each.

The communal kitchen has doubtless come to stay and deserves more attention than it has so far received in California.

* See A. L. Whitney, Monthly Review of Bureau of Labor Statistics, July, 1918.

EDITORIAL COMMENT.

In view of the limited supply of platinum in the country and of the urgent demand for war purposes, it is requested that every doctor and dentist in the country go carefully over his instruments and pick out EVERY SCRAP OF PLATINUM that is not absolutely essential to his work. These scraps, however small and in whatever condition, should reach governmental sources without delay, through either accredited sources of the Red Cross or through any bank under the supervision of the Federal Reserve board. Such banks will receive and pay current prices for platinum. Do not give scrap platinum to an unauthorized agent.

According to the U. S. Public Health Service experience everywhere shows that the proportion of persons with physical impairments is considerably greater in persons between 30 and 40 than in those between 20 and 30 years of age. This waning vitality at ages over 30, so commonly accepted as inevitable, can be postponed to a large extent. In this connection, it is pointed out that 60 per cent. of the physical defects found in the last draft were of a preventable or curable nature.

The U. S. Public Health Service issues a circular entitled "Information for Guidance and Assistance of Registrants Disqualified for Active Military Service Because of Physical Defects." It is a four-page leaflet, containing specific information relating to the commoner causes of rejection or deferred classification, e. g., defective eyesight, teeth and disease, feet, underweight, overweight, hernia, hemorrhoids, varicocele, varicose veins, bladder, kidney and urinary disorders, ear trouble, heart affections, high blood pressure, lung trouble, rheumatism, venereal disease, alcohol, nervous and mental disease, and miscellaneous conditions. The information is presented in simple form and has been approved by the highest medical authorities. At the end is a striking quotation from President Wilson: "It is not an army we must shape and train for war; it is a nation." This circular may be had on request and deserves a wide circulation.

Dr. J. L. Mudd, of Merced, calls attention to the fact that in the July issue of the Journal, page 323, the number of physicians in Merced county was wrongly stated. It is a pleasure to correct the error and record that, of the twenty practicing physicians of Merced county, five, or 25 per cent. are now in service.

Your particular attention is directed to the articles appearing in the Department of Pharmacy and Chemistry by Dr. Felix Lengfeld. These critical and suggestive reviews are of real value to the busy physician who has neither time nor skill to adjudge pharmaceutic values himself, and who runs, therefore, the risk of missing something of real value, or, on the other hand, of falling into an error of ignorance.

There are unmistakable signs that various political interests and aspirants are fully alive to the vote-getting qualities of the medical profession. It is surprising how many votes are influenced or even directed by the expressed opinions of physicians. Especially is this true in California, where equal suffrage allows women a just share in government. Certain recent examples show strikingly that the civic and political influence of physicians is a powerful weapon not to be held lightly by friend or foe. Consider these points in your daily round among patients and friends.

In a recent address, F. W. Shepardson, Illinois State Director of Registration and Education, states the evident fact that there are more fakers and charlatans in medicine than in all other trades and professions combined. This condition is, after all, not improving. We are minded, by way of comment, to recall the strange fact that custom and tradition decree that the medical profession should be alone and fully responsible for purifying its own ranks, and also should be chiefly responsible for the protection of the public against the pre-named fakers and charlatans. To be sure we ought to purify our own ranks. So far as we fail in this, do we deserve censure. But, we ought not to be taxed financially or otherwise with the full burden of protecting the public against the fakers and charlatans, of whom the great majority can claim no blood relationship to the medical profession. The public is to benefit and the public should pay for the benefit, in money, time, interest, education and men. It is unjust for doctors to foot the entire bill. Let the public and not the medical profession be directly responsible for the fakers and charlatans.

FLIGHT SURGEONS.

For the care and conditioning of fliers in the air service the Government is now appointing a corps of doctors and trainers large enough to equip each training field and camp for fliers, both in the United States and in France. The doctors will be known as flight surgeons and the trainers as physical directors.

The medical branch of the air service is not alone confined to the selection of the flier but to his care and condition after he has been admitted to the service. It has become apparent that the flier is unlike other soldiers. In the air service he has become an intricate, highly sensitized piece of mechanism with troubles all his own. To keep his complex organism physically fit a special master mechanic had to be provided solely for him.

The flight surgeon, therefore, has been given freedom of independent initiative in all questions of fitness of the fliers. Subject to the approval of the commanding officer, he is expected to institute such measures as periods of rest, recreation, and temporary excuse from duty as may seem advisable. He takes sick calls of aviators; he visits such cases as may be in the hospital and consults with the attending surgeon regarding them. He makes the examination of candidates for aviation and lives in close touch with fliers.

The physical directors are assistants to the flight surgeons and their duty is to supervise such recreation and physical training of the fliers as is considered necessary.

Original Articles

SYPHILIS OF THE THYROID GLAND REPORT OF A CASE.*

By EDWIN H. SCHNEIDER, Los Angeles, Cal.

Syphilis of the thyroid is one of the rarest diseases that affects this organ, but the fact that it does occur and may so easily be mistaken for carcinoma which occurs in about one per cent. of goiters, justifies my calling your attention to this subject.

In reviewing the literature on syphilis of the thyroid gland I find some authors do not mention it at all, others state it is very rare. Adami in 1911 mentioned that eleven undoubted cases are found in the literature. Twenty-three apparently authentic cases of tertiary syphilis of the thyroid gland have been reported to date: five by Mendel, three by Abraham, three by Demme, one each by Köhler, Pospelow, Thursfield, Clarke, Barth, Gombault, Fraenkel, Davis, Poncet and Lerche, Clarke, Thompson, and a case in the Museum of the Royal College of Surgeons. Of these, only four cases, two of Mendel's, Clarke's and Poncet and Lerche's case, were diagnosed both clinically and histologically. American literature has produced only three cases, Davis's case proven histologically at post mortem, Clarke's and Thompson's case proven only clinically.

I wish to report a case of gumma of the thyroid gland proven clinically and histologically with the patient still living and well two years after operation.

Mrs. E. L. B., white, American birth, age 48 years, was referred to me by Dr. F. C. E. Mattison and examined March 29, 1916. Family history—Negative. Past history—Married at 19 years. Divorced seventeen years ago. Myomectomy seventeen years ago. Hysterectomy for fibroids three years ago. Goiter for seventeen years which disappeared with the onset of the present complaint.

Present complaint—Difficulty in breathing of three months' duration, becoming rapidly worse. Past three weeks must sit up in bed to sleep. Marked pressure sensation in throat during last six weeks. Hoarseness with brassy cough for seven months. Lost ten pounds in weight during past month.

Examination—Patient fairly well nourished, weighing about one hundred and twenty-six pounds. Skin of face pigmented, a muddy color, as seen in adenomatous goiter with intoxication. No evidence of myxedema.

General outline of neck normal except that on the right side in the region of the superior pole of the thyroid gland is a soft tumor mass with an indefinite outline about two centimeters in diameter. It is not tender or painful. There is no discoloration of the skin and it is not attached. The tumor was first noticed three and one-half months ago and has been enlarging gradually. With the appearance of this tumor, the goiter, present seventeen years, about the size of a hen's egg located in the mid-line just above the sternum, gradually disappeared and pressure symptoms were soon noticed.

The subcutaneous tissue from the lower border of the thyroid cartilage above to the sternum below and extending about three centimeters to either side of the mid-line was so hard that it was impossible to palpate the thyroid gland. In the angle over the sternum upon deglutition the top of a spherical tumor could be palpated. No cervical lymph glands were palpable. The skin over the indurated area was not adherent and showed no evidence of inflammation. Nose and throat—Negative. There was no paralysis of the vocal cords. Heart—Pulse one hundred, regular. Heart dullness enlarged one centimeter to the left. No murmurs. Blood pressure—Systolic one hundred fifty. Diastolic eighty. Lungs—Negative. Abdomen—Negative. Pelvis—Body of uterus absent. Urinalysis—Specific gravity 1.012. Acid, no albumin, no sugar or casts. Pupils react to accommodation and to light. Neurology—Negative except that patient nervous and worried about her neck.

A diagnosis of adenoma of the thyroid gland with a probable secondary malignancy was made. The total absence of any enlarged lymph glands made a diagnosis of malignancy doubtful considering the extensive induration of the tissue overlying the thyroid gland.

An exploration was advised. March 31, 1916, under light ether anesthesia a collar incision was made and the skin reflected above to the lower border of the thyroid cartilage and below to the upper border of the sternum. The sterno-hyoid and sterno-thyroid muscles could not be recognized but appeared as a diffuse homogeneous mass of fibrous tissue extending from the thyroid cartilage to the sternum. The soft tumor mass two centimeters in diameter which was located in the region of the upper right pole of the thyroid gland proved to be a greyish putty-like softening of the muscle in this region. Separating the fibrous tissue in the mid-line in order to expose the thyroid gland it was seen that no thyroid tissue could be recognized and apparently the entire gland was a mass of fibro-cartilaginous tissue which was closely adherent to the thyroid and cricoid cartilages as well as the trachea. Dissecting down along the right side of the trachea to find the source of pressure which was so marked that the ether anesthesia had to be frequently discontinued, a circumscribed tumor two centimeters in diameter was found lying in a mass of fibrous tissue partly imbedded into the side of the trachea about one centimeter below the cricoid cartilage. Traction forward and outward upon the tumor immediately improved respiration and it was rapidly enucleated, having apparently but little attachment to the surrounding tissue. Very little bleeding occurred during the operation as all the diseased tissue seemed avascular. No other tumor could be found, and as the patient now was breathing normally it was decided the object of the operation was accomplished.

Pieces of tissue removed from the soft tumor mass in the muscle as well as in the region of the tumor adjacent to the trachea were removed for further examination. The skin was closed with a double row of subcutaneous cat gut suture.

Microscopically the tumor resembled an adenoma of the thyroid gland, and upon being cut in half showed apparently the same structure as one of these tumors which are so frequently found in the thyroid gland. The tissue removed was microscopically examined by Dr. Lorena Breed, who reported syphilis of the thyroid gland. The microscopic sections which may be seen later by those who are interested shows an irregular interstial proliferation containing many embryonic connective tissues and some giant cells. The blood vessels all show obliterating arteritis. The thyroid tissue varies in areas from a total destruction by a fibrous tissue overgrowth to apparently normal acini, on a whole it takes the adenomatous type. The only area which shows caseation is in the sections from the muscle surrounding the soft tumor mass. The local softening of the sterno-thyroid muscle noticed at operation suggested gumma, so the next day blood was removed from the median vein of the patient and sent to Drs. Walter Brem and A. H. Zeiler for a Wassermann test. A report of Wassermann four plus positive was received. Increasing doses of potassium iodide were immediately ordered

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

for the patient, with the result that the induration of the tissue over the thyroid gland disappeared within three weeks. Antisyphilitic treatment was continued until the Wassermann reaction was negative three months after discontinuing the treatment. It is now two years after operation and the patient, recently seen, considers herself well.

Inquiry about the time of the syphilitic infection brought out the fact that the patient had not mentioned anything about a possible venereal history because the second husband was present when the first history was taken. In a later history the patient stated that her first husband after returning from a three months' visit to New Mexico doctored for a running sore of the left groin, and a short time after that she began to have severe headaches starting at 3 A. M., accompanied by a sore on her tongue like a piece bitten off and a rash over her body. Her hair fell out and there was some nausea and diarrhoea. These symptoms subsided in a few weeks so she did not consult a doctor and had no treatment.

Considering now the luetic history, the slow development of a painless induration involving the thyroid gland and overlying muscle, the absence of any enlarged glands, the area of caseation in the sterno thyroid muscle, the general fibrosis of the thyroid gland and adjacent tissues, the histological picture of syphilis, the four plus positive Wassermann and the immediate therapeutic relief with no recurrence after two years I believe we have sufficient evidence to prove this a case of tertiary syphilis of the thyroid gland.

A most interesting fact we must not overlook is that the patient had an adenomatous form of goiter for seventeen years previously and therefore an abnormal thyroid gland when it became infected with syphilis. It is quite possible as Mendel has suggested that syphilis apparently only affects already diseased glands and that the iodine content of normal glands prevents the localization of the syphilitic virus.

In reviewing the reported cases of syphilis of the thyroid gland as to the presence of a goiter and as to its type I find it difficult to draw definite conclusions as to the presence of a previous goiter because only in the case reported by Mendel from Thiersch's Clinic at Leipsic in 1883 is it definitely mentioned that a goiter had been present twenty-six years previously. Most authors speak of recent tumors of the thyroid that histologically prove to be gummata or clinically disappear under antisyphilitic treatment. It would seem then that tertiary syphilis of the thyroid may occur in two forms, a diffuse cirrhosis of the thyroid without tumor formation and a more frequent form with tumor formation.

I place my case in the class without tumor formation, as was the case reported by Davis, as the presence of the adenoma was merely a coincidence, although by intering with the iodine content of the gland probably the cause of the thyroid becoming infected.

References.

Lang, E.: Jaresb. d. Gesellsch, f. Natur u. Helik. in Dresden 1851-52.
Demme: Krankheiten der Schilddrüsen, Bern, 1879.
Barth and Gombault: Progres. Med., 1884, xii, 834.
Fraenkel: Deutsch. Med. Wchnschr., 1887, xiii, 1035.
Engel-Reimers: Jahrb. d. Hamburg. Statskrankenanst, 1891-92, ii, 430-436.
Köhler: Berl. klin. Wchnschr., 1892, xxix, 713.
Lockwood: St. Bartholomew's Hosp. Rep., 1895, xxi, 232.
Pospelow: Monatash. f. prakt. Dermat., 1894, xix, 125.
Clarke: Lancet, 1897, ii, 389.
Mendel: Med. Klin., 1906, ii, 833.
Thursfield: Brit. Med. Jour., 1908, i, 147.
Davis: Arch. Int. Med., 1910, v, 47.
Poncet and Leriche: Gaz. d. Hôp., 1912, 945.
Favre and Savy: Lyon Chirurgical, 1913, ix, 511.
Clark: Jour. Am. Med. Assn., 1914, lxiii, 1951.
Thompson, Lloyd: Am. Jour. Syphilis, 1917, vol. 1, No. 1, 179.

SEMINAL VESICULOTOMY IN THE TREATMENT OF GONORRHEAL RHEUMATISM.*

By JAMES R. DILLON, M. D., San Francisco,
Clinical Instructor in Genito-Urinary Surgery, Stanford University Medical School.

With increasing knowledge as to the origin of arthritis and the recognition that practically all cases are manifestations of some form of toxemia, more and more attention is being given to the recognized sources of infection. In the year 1901 Dr. Eugene Fuller reported on the technique and the results of his operations on the seminal vesicles. Genito-urinary surgeons were slow to appreciate the value of his teachings until they had learned to recognize the types of cases most suitable for seminal vesiculotomy. This report will consider only those cases having frank Neisserian histories and which presented arthritic symptoms and other systemic manifestations dependent upon focal infections in these organs and which could not be overcome by the usual non-operative methods of treatment, with the exception of two patients who were suffering so intensely from their rheumatism during the subacute stage of their urethritis that I operated to relieve their joint pains before the urethral condition was sufficiently treated.

The lumen of the ejaculatory ducts is relatively and absolutely larger than the prostatic ducts, therefore coincident vesicular infections must be at least as frequent as infections of the prostatic ducts and prostate. When we consider our anatomy and realize that less than 4% of vesicles have straight tubes and 96% have tubes of varying lengths and capacities due to twists and diverticula, we come to know that the chances of spontaneous cure are very slight and that resolution by natural drainage through the ejaculatory ducts is mechanically impossible. When therefore the vesicles become the foci of chronic inflammation and, because of this faulty drainage, the products of infection are retained within them under pressure, it is easy to understand how infectious emboli and toxins may gain entrance into the circulation and give rise to disturbances in other quite remote and apparently unrelated structures. The relationship of small dental abscesses, pyorrhea, sinus suppuration, tonsillar infections and rheumatic inflammations is now generally acknowledged and the cause of chronic arthritis is confidently sought for in these conditions.

In 1904 Fuller recognized the relationship of focal infection in the seminal vesicles to gonorrheal arthritis and proved that surgical drainage of such foci resulted in a cure of arthritis. His conclusions

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

have since been substantiated by several other genito-urinary surgeons, and it therefore becomes necesary in explaining a secondary arthritis to consider the seminal vesicles as a possible origin of the trouble. From the clinical standpoint the operative results of seminal vesiculotomy for gonorrheal rheumatism have been uniformly most brilliant in all reports published. Patients who have been invalids periodically and constantly for months and years, some with mon-articular affections and others with multiple joints and tendon affections, have had their pains disappear permanently from the affected joints after vesiculotomy, on awakening from the ether, and even large swollen, painful joints have often become normal in appearance within 24 to 48 hours following operation. Periarticular lesions improve much more rapidly than do intra-articular lesions.

Gonorrheal rheumatism is generally considered to be due to a mixed form of infection. Just what part the gonococcus plays is still unsettled. Some credit it with being the chief factor because the germ has been found in the affected joints and bursae; others claim it plays but a minor role. Most surgeons have found the gonococcus regularly absent in chronic vesiculitis, and present only in acute suppurative cases. Squier reports obtaining almost constant growth of pyogenic bacteria. The gonococcus is apparently the original invading micro-organism and because of the localized inflammatory reaction which arises from its presence it is shortly joined and perhaps supplanted by a variety of pyogenic micro-organisms. The gonococcus may undergo mutation within the vesicles, depending upon the alterations in the environment, and may then show selective tissue affinity.

Individuals attacked by gonorrheal rheumatism show a marked susceptibility to it, in that, if their first urethritis is complicated by rheumatism it is extremely likely that they will redevelop it not only with subsequent attacks of gonorrhea but also following surgical instrumentation or treatment which awakens acute inflammatory reactions in old quiescent lesions of the seminal vesicles. For this reason there must be some element other than mixed infection to account for the rheumatic complication.

Two distinct pathological changes have been observed. First the inflammatory reaction is limited to intrinsic changes in the vesicles and prostate in the early stages. The vesicles become swollen, distended and fluctuant with the production of inflammatory products and retained secretion with or without occlusion of the ejaculatory ducts and from retention of infectious products under pressure. The prostate becomes swollen and boggy from congestion with blood and infiltration with lymph. Barney found that pathological specimens obtained at operation show various degrees of inflammation in the same vesicle, acute abscess formation in various places, areas of hemorrhage, and much newly formed connective tissue, while other sections appeared perfectly normal.

Second, in the later stages, when these structures have harbored infection over a long period of time the surrounding tissues normally soft develop a perivesiculitis and periprostatitis, become indurated and finally adherent to the thickened walls of the vesicles and prostate, and encase them in dense scar tissue and adhesions. When very extensive and diffuse this produces compression of vesicles, vas deferens, prostate and terminal ureters in which kinking may be produced. Also reactive changes take place in the form of basal cystitis or trigonitis. When one vesicle is inflamed it is usually shared in by the other due to their proximity at the junction with the vas, also when the vesicle is diseased its vas, especially the ampulla, is likewise affected. The seminal vesicles are often hard to palpate because of their small size but more often because of the plastic exudate in which they are imbedded. Many variations occur between these two types of pathological vesicles depending on the mode and character of infection. Also it must be remembered that the seminal vesicles may be only part of the trouble. Changes in the prostate or deep urethra may be as important in production of local or systemic symptoms as the vesicles and the results of drainage may be disappointing unless the prostate and urethra receive proper attention.

In considering the effect of the seminal vesicles on the sexual condition, Walker observed in rabbits that on extirpating the seminal vesicles, that the sexual capacity was unimpaired but the percentage of fertility was greatly reduced, and impregnation was more or less delayed. The seminal vesicles not only act as a reservoir for a portion of the semen but also have a special secretion of their own which is highly essential to the formation of normal semen. Barney (quoting Huet) states that in young animals, including man, the seminal vesicles are very rudimentary and comparatively undeveloped. Also in the aged after cessation of sexual activity and barring infection, the vesicles atrophy and resume more and more the resemblance to the child. Animals show distinct evidence of inactivity of the seminal vesicles after castration, also during hibernation in bats. On the other hand, during sexual excitement and just before coitus the microscopic picture is one of immense activity. All of which goes to show that the seminal vesicles and testes are interdependent and form with the prostate a procreative triad essential to posterity. For this reason the seminal vesicles should not be totally excised any more than the ovaries from a woman. A most satisfactory clinical result can be obtained by slitting the vesicles longitudinally and gently curetting them, and draining off the pus and infection and giving the diseased tissue a chance to heal. Fuller states that seminal vesiculotomy properly performed does not produce sterility, but on the other hand has frequently resulted in virility in cases where sterile marriage had previously existed.

Case 1. No. 10.029, T. L., Greek, cook, age 28 (present age). Came to the Stanford Medical Clinic December 19, 1913, complaining of sore feet. Family history negative. Past history negative, with the exception of several attacks of gonorrheal urethritis. First one in 1910 cured in six months. Second attack in 1911, cured in six to seven weeks. During this attack he had rheumatism in the right knee and right ankle which swelled and became red

and painful. Cleared up in about three weeks. Had similar attacks in 1912 in the same joints. In November, 1913, the right ankle became red, swollen and painful, later, left sterno-clavicular joint. He got better under treatment at the French Hospital, but had relapsed four days after leaving. He applied at the Stanford Clinic and was treated in Lane Hospital for two weeks, with massage, silver nitrate irrigations and vaccines. He improved under treatment and was discharged January 3, 1914. Returned March 13, 1914, with profuse discharge appearing four days after intercourse. Many Gram negative diplococci present. Treated with permanganate injections, hot sounds and vaccines. Recovered and was well for two years, when a fresh urethral discharge appeared, five days after intercourse. Discharge stopped in about a week and rheumatism started in again in right ankle, left toes and right sterno-clavicular joint. Two weeks later left knee and ankle and right shoulder became involved. Treated at San Francisco Hospital with vaccines, massage and irrigations for three months with slight improvement. Reported at the Stanford G. U. Clinic September 7, 1916, complaining of pains in knees, ankles and shoulders. His tonsils were removed September 12, 1916. Treated in the clinic more or less constantly with massage, dilatation, irrigations, and instillations for ten months, until June 20, 1917. At this time his prostate was much enlarged, tender and nodular. Both vesicles were very large, hard and tender. Secretion, almost pure pus. Nearly every joint in his body was affected and he had not worked for over a year. A seminal vesiculotomy was done at the San Francisco Hospital June 26, 1917. Both vesicles were found distended and full of pus. Both were opened and curetted. Both lateral lobes of prostate were incised. Drainage tubes were inserted, and wound closed. On recovering from the anesthetic, patient stated he had no more pain and could move his joints freely. Bacteriological examination of pus obtained at the operation was negative. Discharged from the Hospital in four weeks and has been working since August 1, 1917. He was last seen in February, 1918, and stated he has had no disturbance in sexual power or sensation, and no joint symptoms. Both urines were clear in the two glass test.

Case 2. P. N., No. 25,789, American, 40 years of age. Family history negative. Past history negative except for veneral troubles. First gonorrhea when seventeen years old, does not think he was ever cured. It has broken out a dozen times since. It seemed he got a fresh attack every time he became intoxicated. He had inflammatory rheumatism seven years ago, for eleven months. He was in bed for six weeks and on crutches for three or four months. He entirely recovered from it. States that the rheumatism did not come in connection with an attack of gonorrhea. He had a chancre seven years ago and took one intramuscular injection of 606.

Present illness.—Contracted gonorrhea May 1, 1917. Got it cured and rheumatism started May 25, 1917. Started in right hip and in three days every joint in his body was affected—ankles, knees, hips, back, shoulders, collar-bone. He then went to the "Springs" for 5 weeks but noticed no improvement, so went to a herb doctor (Chinese) for two weeks, but grew worse. He came to the Stanford Clinic, August 9, 1917. Examination showed no discharge from the urethra. Urine, glass 1, cloudy, several shreds; glass 2, faint cloudiness; glass 3, clear. A smear of the urinary shreds showed considerable pus but no micro-organisms. Prostate slightly enlarged and very tender. The seminal vesicles were slightly palpable. Prostatic secretion showed 60 per cent. pus. Wassermann xxx. Three weeks' treatment with irrigation and massage did not help him. A seminal vesiculotomy was performed on him August 31, 1917. Bacteriological examination of pus obtained at operation, negative. The pains gradually disappeared in about a week, but stiffness persisted for two or three weeks longer. He has been free of pain and working as a laborer at the Union Iron Works for several months. Patient was seen last month and reported that he was entirely free of pain. Both urines were clear.

Case 3. J. R., No. 56659, Irish, age 38, occupation miner. Family history, negative. Past history, typhoid and pneumonia, at 30. He had repeated sore throats before tonsillectomy in November, 1916. Had gonorrhea and four sores once, eight years ago. Treated himself with peroxide for one month.

Present illness.—In July, 1916, he began to have pain and swelling in both wrists, especially the left one, until he had to quit work. About six months later both elbows and knees became swollen, painful and stiff. At that time he was being treated with magnesium sulphate compresses externally and he took salts internally. He was given vaccines and his tonsils were removed. Condition improved so that he could get around again, but pain and stiffness persisted. Entered Stanford Clinics, July 20, 1917. Examination showed no discharge. The testes, cords, epididymi were normal. Urine glass 1, cloudy with many shreds and granules; second glass, slightly cloudy. The prostatic lobes were large, doughy and slightly nodular. The right seminal vesicle was matted and more palpable than the left. The prostatic secretion was almost pure pus. He was treated with massage, irrigations and vaccines for several weeks without any improvement. On September 8, 1917, a seminal vesiculotomy was done and the lateral lobes of the prostate incised. Bacteriological examination of the pus obtained at operation showed staphylococcus albus. The pains rapidly disappeared from all his joints in two or three days except the wrists, which improved more slowly. He was last seen four months after the operation and stated he felt fine except for a slight pain and stiffness in the left wrist in the mornings, which wore off after working a short time. Both urines were clear in the two glass test.

Case 4. E. M., No. 26699, age 36, laborer, American. Family and personal history negative, except for venereal history. He had his first gonorrhea in 1900, lasting five weeks. He was treated with pills internally. In 1910 he had a second attack lasting one month, also treated it internally. He had his last attack in October, 1916, and three weeks after the onset the left sterno-clavicular joint became swollen, red and painful, and within a few days the left wrist, ankle and knee joints were attacked. He was treated in a hospital for six months with vaccines, permanganate irrigations, santal oil, and sounds, without showing any improvement. During the period of a year he had been bed-ridden most of the time and he still walked with difficulty even on crutches when he entered the San Francisco Hospital, October 9, 1917.

Examination showed a slight mucus discharge at the meatus. A smear showed no micro-organisms and only scattered pus cells. Urine, glass 1, clear, many mucus shreds; glass 2, clear. The testes, cords and epididymi were normal. The prostate was small, hard and very tender. The seminal vesicles were barely palpable and were very tender with considerable infiltration about them. No secretion was ever obtainable by massage. Wassermann negative.

A seminal vesiculotomy was performed and the prostatic lobes incised October 16, 1917. The pain disappeared from every joint within five days and he was able to walk at the end of two weeks without discomfort, except for a tenderness in the right heel due to a spur on the os calcis, shown by an X-ray. This pain disappeared almost entirely with a few bakings in an electric oven.

Bacteriological examinations of the pus obtained at the operation showed a gram positive bacillus and a large gram positive diplococcus. The patient has not been heard from since he left the hospital.

Case 5. J. W., No. 26641, German, age 35. Entered San Francisco Hospital, October 5, 1917. Family history: Mother died of tuberculosis at 38; brother died of tuberculosis, age 22. General health always good. He had scarlet fever, diphtheria and whooping cough before he was ten years old; pneumonia and typhoid four years ago; malaria twelve and six years ago. Ten years ago he had gonorrhea, followed two weeks later by joint pains which cleared up in about two months. Used alcohol to excess at times; tobacco excessive.

Present illness.—Gonorrhea started six weeks ago. Two weeks later pains started in hips and back, then went to left foot, which passed away in a few days and appeared then in the right knee joint, which became swollen and reddened. He still had a yellow discharge from urethra.

Examination: Discharge at meatus showing gram negative intracellular diplococci. Urine, glass 1, cloudy and many shreds; glass 2, slight cloudiness. Testes, cords, epididymi, normal. Prostate large and tender. Left lobe larger than right, and Median furrow shallow. Seminal vesicles palpable. Right knee swollen, reddened, very painful and tender. Considerable fluid in joint. Motion greatly limited. Left ankle tender. October 10, 1917, knee joint aspirated and 300 cc. of turbid fluid withdrawn. Four cc. of 10 per cent. argyrol injected into the joint. Smears and cultures of the fluid were negative for bacteria. Smear showed many pus cells. Considerable reaction followed the injection of the argyrol, and glass drainage tubes were inserted into the joint, allowing the escape of considerable purulent fluid. Also treated with hot air bakes and Bier bandage. Later leg was put in plaster cast. The gonorrhea had been treated with irrigations and massage, and the discharge cleared up, but the swelling and pain were still present in the knee at the time of the seminal vesiculotomy, October 30, 1917. The right seminal vesicle was greatly distended and filled with a purulent fluid. The lower end of the seminal vesicle and vas were encased in dense fibrous tissue. The left seminal vesicle was atrophied into a hard cord and closely adherent to vas in a thick sheath of fibrous tissue. The left seminal vesicle was removed. The ampullae of the vasa were incised, also the lateral lobes of the prostate.

Patient stated all pain was gone from knee when he awakened from the anesthetic and the swelling entirely disappeared within a few days, but the urethral discharge reappeared on the third day after the operation. He left the hospital, November 19, 1917, with the knee in a normal condition but with a slight urethral discharge.

The smears of pus taken from the seminal vesicles at the operation showed gram negative, biscuit-shaped diplococci from each side, but the cultures were negative.

Three days after leaving the hospital this patient reappeared at the clinic with a return of his arthritis in his right knee and with a profuse discharge which showed no gonococci and no acid-fast bacilli. Urine in the two-glass test—both very cloudy. He denied taking alcohol and re-exposing himself. He has been treated with permanganate and silver nitrate irrigations, and with prostatic massage and instillations, with considerable improvement in his condition, but the prostatic secretion is still heavily laden with pus. On several occasions since the operation the prostatic fluid has contained live spermatozoa, showing the vasa are patent.

This patient was one of the two exceptions noted above who was operated on while his gonorrhea was in the subacute stage, and though the immediate effect of the operation was very gratifying, as soon as the perineal drainage stopped and he was given his liberty outside the hospital he rapidly had a return of his symptoms. Possibly if he had been kept quiet in the hospital a few weeks longer, and his urethra and prostate given proper attention, the operative result would have been permanent.

Case 6. J. D., age 37, No. 27641. Entered November 20, 1917, San Francisco Hospital. Complaint, rheumatism. Father died of alcoholism; mother drowned. Mumps, measles and chickenpox as a child. Gonorrhea three times, last time in 1910. Denies chancre and secondaries. He was treated in Stanford Clinics for chronic prostatitis from July, 1916, to May, 1917. He returned with the complaint of rheumatism November 7, 1917, having pain in his shoulders, elbows and knees for more than three months. Tonsillectomy when young. Married, one healthy child.

Examination: No discharge. Urine, glass 1, clear, many fine flocculent shreds; second glass, clear. Testes, cords, epididymi, normal. Prostatic secretion 50 per cent. pus. Prostate tender, nodular, slightly enlarged. Both vesicles distended and tender. Seminal vesiculotomy done November 24, 1917. Both vesicles very friable and surrounded by a hard fibrous sheath. Prostatic lobes incised and drainage tubes inserted. Patient on awakening from the anesthetic stated his pains were gone and has had none since. He could move his arms freely after operation, before he could not touch his head with his hands. Discharged from the hospital 18 days after the operation. He reported February 15, 1918, feeling fine as far as the arthritis was concerned. He has been impotent for several years, but since operation he stated that he had "slight signs of life." Bacteriological examination of culture taken at operation, negative.

Case 7. H. J., Norway, single, stevedore, age 37, No. 28743, San Francisco Hospital, January 31, 1918. Complaint, rheumatism, stiffness and pain in joints. Family history: Negative. Malaria five years ago; gonorrhea four years ago. Denies chancre and secondaries. Alcohol to excess at times; no tobacco.

Present illness.—Began four years ago, in 1913, when patient contracted gonorrhea. It discharged for two months. He was at sea at the time, and while using injections the discharge suddenly stopped and the left testicle swelled up. One month later he began to have stiffness and pain in the right ankle. No swelling or tenderness. In a few days it shifted to the left ankle. Then the right knee became involved, followed by the hips, shoulders and elbows. He never had any fever or sour sweats. He has worked off and on during the last four years, but joints would get worse after working hard. Has never been in bed on account of rheumatism. For the last year he has had pain in region of heart at times.

Examination: Well developed and nourished man. Defective gait due to pain and stiffness in ankles. Teeth in poor condition. Many old roots in upper and lower jaws and marked pyorrhea alveolaris present. Tonsils enlarged and cryptic. Urine, glass 1, clear, many shreds; 2, clear. Both epididymi enlarged, hard nodular, especially the left. Testes, normal. Left cord thickened, no tenderness. Prostate much enlarged, especially left lateral lobe and slightly nodular. Left seminal vesicle enlarged and surrounded by considerable infiltration. Right hardly palpable. No prostatic secretion obtained. February 4, 1918, seminal vesiculotomy done and prostate incised under spinal anesthesia, two grains of tropococaine being used. Two hours after operation patient stated that all pains had left his joints and that he could move his arms freely without discomfort. One week later a yellow discharge appeared at the meatus, showing a gram positive extracellular diplococcus. Cleared up with permanganate irrigations. Drain-

age tubes removed on the eleventh day and patient discharged on February 28, 1918. Last seen on April 1, after working for weeks with no recurrence of rheumatism or urethritis. Bacteriological examination of cultures taken at operation, negative.

Case 8. C. S., 46143, American, carpenter. Entered Stanford orthopedic clinic, September 13, 1916. Complained of pain in hips, back and feet, of two weeks' duration. Several attacks of gonorrhea, last one in 1906, which took six months to cure. Similar attack of rheumatism in 1909.

Examination: No discharge; testes, epididymi, normal; varicocele left cord. Urine, both glasses clear; first contained fine shreds. Prostate slightly larger than normal, quite tender. Left lobe at base is hard and indurated. Right lobe more indurated at apex. Seminal vesicles not definitely palpated on account of so much infiltration. Very little prostatic juice ever obtainable, but pus always present. He walked with a marked limp due to contractions in the left hip joint, shortening the left leg about two inches.

This patient was treated with dilatations, massage, irrigations, instillations and vaccines off and on for eighteen months, getting better at times and working a while, but never free from pain. He entered the hospital and a seminal vesiculotomy was done February 12, 1918. Around the base of the prostrate and encasing the vesicles and ampullae of the vasa was a dense, tough, massed fibrous tissue fully a quarter of an inch in thickness, adjoining the prostate and thinning out toward the ends of the vesicles. On dissecting out the vesicles they were found to be greatly distended with a purulent secretion and surprisingly large in size, considering that they could not be distinctly palpated per rectum. Within twelve hours the pains left his feet and legs, and more gradually left his back and right hip during the next ten days. The left hip persisted in troubling him. An X-ray showed considerable tilting of the pelvis and contraction of the muscles in the left hip, with rarefaction in great trochanter of the femur, suggesting a tubercular process more than a gonorrheal condition. However, the joint readily responded to electric bakes, the contraction loosened up, the pelvis became more straight and the left leg lengthened to almost normal. He left the hospital about a month after the operation entirely free of pain. The bacteriological and pathological specimens were lost.

Case 9. G. G., No. 59927, Greek, age 28. Entered Stanford Clinics, November 2, 1917. Complaint, pains all over. First gonorrhea nine years ago. Epididymitis during this attack. Four years ago second attack, discharge stopped in a few days and six weeks later pain started in the right hip, then went to the left and has been in one or the other ever since. Third gonorrhea about a year and a half ago. Cured in three months. Last attack two and a half months ago, and after two weeks pains appeared in ankles, muscles of legs and neck and hands.

Examination: Slight mucus discharge, showing many pus cells but no micro-organisms. Left epididymus enlarged and nodular. Urine, glass 1, clear, few large shreds; 2, clear. Prostate soft, very tender. Right seminal vesicle thickened and very tender. Considerable infiltration. Secretion showed 20 per cent. pus. He was treated in the clinic for his urethral and prostatic condition for six weeks with only slight improvement. As he had pulmonary tuberculosis he was sent to the San Francisco Tuberculosis Hospital, where he gained in weight and strength, and improved his pulmonary condition and cleared up his urethritis, but his pains still persisted.

A seminal vesiculotomy was performed February 22, 1918, starting under spinal anesthesia of tropococaine, two grains. The bony pelvic outlet was very narrow, and the prostate and vesicles rather high, making the operation more difficult than usual and requiring greater traction. The spinal anesthesia wore off in an hour and the operation was finished under gas and ether. The vesicles were greatly distended with a thin purulent secretion and surrounded with a moderate amount of soft infiltration which bled profusely. The prostate was also very hyperaemic. The lateral lobes were incised. The bacteriological examination of the vesicular fluid was negative. The pains disappeared almost immediately from the legs and arms, and more slowly over a period of two or three weeks from the hips. He is still in the Tuberculosis Hospital, free of pains, except for a complaint of weakness and aching in his back.

Case 10. J. P., Porto Rican, age 35, No. 28955. Entered San Francisco Hospital, February 12, 1918. History negative, except for venereal history. Gonorrhea first time three years ago; discharged for two years Second attack, present one. Denies chancre and secondaries.

Present illness.—Has had an active gonorrheal urethritis for the last three months. Rheumatism set in about two weeks previous to entering the hospital, with a chill and fever, followed next day by pain and swelling in right foot and knee. Then it went to the shoulders, elbows, wrists, and later the mandibular articulations and left leg. Profuse sweats every night. Never had a sore throat.

Examination: Teeth in very poor condition. Marked pyorrhea present. Patient could not open mouth to have throat examined. Nearly every joint in the body was swollen, painful and very tender. Profuse urethral discharge, showing many gonococci. Testes, cords, epididymi normal. Wassermann xxx. He was treated with salicylates, colchicin, electric bakes, methyl salicylate compresses to joints and permanganate urethral and bladder injections. He was somewhat improved after four weeks' treatment, but still in so miserable a condition and was losing weight so rapidly that a seminal vesiculotomy was done on him March 8, 1918, though he still had a slight urethral discharge showing occasional gonococci. Three days after the operation all pain had disappeared except in the right ankle. At the end of two weeks he had slight pain in the right knee. Aspirated about 30 cc. of turbid fluid from the right knee, which showed pus cells but no micro-organisms. Cultures also negative. Arthritis has since entirely cleared up, but slight urethral discharge has persisted and on April 8, one month after the operation, a right epididymitis developed. This was the second case operated on in the more or less acute gonorrheal condition, and though the final result has not yet been attained, the patient was quickly relieved and is now in a very comfortable state.

SUMMARY.

First. Seminal vesiculotomy appears to be a justifiable and indicated procedure in cases of gonorrheal arthritis which have failed to show a reasonable improvement after the acute and subacute urethral conditions have been cleared up by the usual methods of treatment.

Second. The first three cases and two of the later cases have reported that there was no impairment in the sexual function.

Third. The bacteriological etiology was rather indefinite and unsatisfactory. Probably more will be accomplished in this study by using the Rosenow method in obtaining and caring for the specimens.

Fourth. The clinical results of the operations

were satisfactory and very much appreciated by the patients, with the exception of Case 5.

Bibliography.

1. The Relation of Gonorrheal Rheumatism to Seminal Vesiculitis, and its Cure by Seminal Vesiculotomy Eugene Fuller, New York. Annals of Surgery, Vol. 41, pp. 902-913. 1905.
2. Operative Surgery Applied to the Seminal Vesicles. Eugene Fuller. The Medical Record, Vol. 65. 1904.
3. Walker. Johns Hopkins Hospital. Report. 1911.
4. Recent Studies in Pathology of Seminal Vesicles. J. Dellinger Barney. Boston Medical and Surgical Journal, July 9, 1914.
5. Arthritis Associated with Lesions of the Genito Urinary Tract. E. G. Brackett. Boston Medical and Surgical Journal, July 9, 1914.
6. Surgery of Seminal Vesicles. Remarks in reply to criticism. Eugene Fuller. Medical Record, January 23, 1915.
7. Drainage of the Seminal Vesicles. Squier. New York Medical Journal, Feb. 20, 1915.
8. Seminal Vesiculitis and Prostatis Treated by Vesiculotomy and Prostatic Drainage. John H. Cunningham, Jr., Boston. Boston Medical and Surgical Journal, March 22, 1917.
9. A Technique for Drainage or Excision of the Seminal Vesicle. John H. Cunningham, Jr. Surgery, Gynecology and Obstetrics, April, 1917.

DISEASE OF THE AORTA AS SHOWN BY FLUOROSCOPIC STUDY.

By SAMUEL ELLSWORTH BAILEY, M. D.,
Berkeley, California.

During the past year, I have been handling the work of the x-ray department of Fabiola Hospital and many kinds of cases have passed through my hands for diagnosis or treatment, nearly all being cases referred by other physicians. The hospital fortunately has an adequate roentgenological equipment of which an excellent fluoroscope is part. Much use has been made of the opportunity thus afforded and a large number of cases screened routinely.

While all parts of the body may be examined roentgenoscopically, the fluoroscopic shadows or images thus obtained vary greatly in value and significance. Of all such shadows, those cast during fluoroscopic examination of the thorax give the most definite information and yield the most satisfactory and suggestive results. This is due to the slight resistance offered by the lung tissue and the great contrast between the latter and the heart and great vessels. As an additional consideration, there is the mobility of the chest wall, the diaphragm, and the pulsation of the heart and great vessels. The images or shadows cast by these moving parts give definite, discernible outlines and contrasts that cannot be obtained in organs comparatively static.

In fluoroscopy of one hundred and fifty odd patients of all ages, there have been eighteen cases that showed definite fluoroscopic evidence of aortic disease. In a majority of instances there were no physical signs or symptoms directly referable to the vascular system and certainly not to the aorta. Many of the cases were observed incident to the course of a roentgenological examination of the gastro-intestinal tract; in some there was clinical suspicion of trouble "somewhere" in the chest.

The conditions ranged in severity from purely functional cases of dilated heart with accompanying dilated aorta (recovering quickly under rest, etc.) through cases of moderate organic dilatation both with and without the deposition of calcareous placques (often easily visible in the screen) to small, unimportant dilatations and shallow aneurisms—finally to very large life endangering aneurisms.

It will be observed that the Wassermann reaction was positive in six of the eighteen, negative in ten and undetermined in two of the series. Seven of the cases are under forty years of age; of these seven, five gave positive Wassermanns, one a negative and one was undetermined. Eleven cases are over forty; of these only one, a woman, gave a positive Wassermann. In the five cases under forty with positive Wassermanns there were definite small sacculations in all but one case, this in a young man of twenty-seven who, however, had a dilated aorta (8 cm.) with calcareous placques and these predominately of the ascending and transverse arm of the aorta. The ten cases with negative Wassermanns are with one exception all over forty and mostly over fifty. In these elderly people, the small aneurisms, often without symptoms or signs occur practically always in the transverse or descending portion of the arch and are incidents of an arteriosclerotic degeneration, whereas the luetic type more commonly affects the ascending aorta.

Aneurisms are accidents due to the chance occurrence of a lesion in a large vessel with a relative disproportion between the pressure of blood in that vessel and the thickness and tensile strength of that vessel's wall. Many small lesions occur in small arteries and sclerosis with obliteration of the vessel occurs. This cannot happen in large vessels like the aorta. The size and extent of the resulting aneurisms are determined by the pressure and direction of flow of the blood stream and the character of the surrounding tissue.

In syphilitics with the usual accompanying high blood pressure and active mesaortitis, the aneurism is apt to become rapidly and progressively larger with early rupture; in the small incidental aneurisms of arteriosclerotic type, unless there is coincident high blood pressure from other cause, e. g., nephritis, there may be little or no progressive increase in size—in fact, arrest may and does frequently occur. The majority of statistics give as luetic 60% to 85% of aneurisms. Hausman is the only man who depreciates this cause, giving only 18.7% as syphilitic (quoted from Adami). This figure naturally represents varieties which have been recognized clinically and which are usually fairly rapidly fatal.

The particular point to which I wish to call attention is that there exist many small dilatations and aneurisms which are clinically unrecognizable for many years; that these are mostly non-specific and may present no symptoms or signs, or at most indefinite and trivial ones. That eventually they may become a menace to the health or life of the individual due to progressive arterial degeneration or the incidence of increased blood pressure due to intercurrent disease, e. g., nephritis or sudden strain from muscular exertion or extreme emotion. Their early diagnosis is only possible by means of x-ray examination and particularly fluoroscopic examination since here the amount of pulsation and the elasticity of the aortic wall may be estimated. Early

There follows a brief outline of the cases, together with a schematic chart arrangement:

No.	Sex	Age	Clinical	Fluoro-Diagnosis	Wassermann
1	M	35	Suspected	Small of ascending	Positive
2	F	68	Unrecog.	Large of transversal	?
3	M	48	Unrecog.	Small of trans. and desc.	Negative
4	M	50	Unrecog.	Sac. of trans. and dec.	Positive
5	F	45	Suspected	Small of abd. aorta	Positive
6	F	43	Unrecog.	Dilatation	Negative
7	M	36	Unrecog.	Small fus. asc.	?
8	F	31	Unrecog.	Mod. asc. ao. and dilated	Positive
9	M	27	Unrecog.	Dilated aorta 8 cm.	Positive
10	M	38	Recog.	Large fusiform asc.	Positive
11	F	68	Suspected	Dilatation with placques	Negative
12	M	40	Unrecog.	Small asc. ao. fusiform	Negative
13	M	45	Unrecog.	Diffuse dilatation	Negative
14	M	60	Suspected	Small sac. of arch	Negative
15	F	38	Unrecog.	Shallow of trans. and des.	Negative
16	M	35	Unrecog.	Dilated fusiform	Positive
17	M	60	Suspected	Dilated trans. sac.	Negative
18	M	56	Suspected	Dilated	Negative

diagnosis of such conditions would permit a timely warning to the patient so affected and might thus materially lengthen life besides being an immense source of satisfaction to the physician.

Routine fluoroscopic examinations are suggested as a valuable auxiliary to life and industrial accident examinations; they should be employed as a means of estimating the extent of the damage in known cases of arteriosclerosis and should particularly be made in arteriosclerosis known to be of luetic origin, since here early fatal aneurisms are most prone to occur; in heart cases such examinations may be used as a control to therapeusis and as a check on clinical signs.

If in doubt, see, as well as feel and hear, and common experience teaches that information thus obtained tends to strengthen rather than weaken the acuity of perceptions gathered by methods of palpation, percussion, and auscultation, for it as frequently confirms as denies impressions so gained and thus links visual with auditory and sensory perceptions.

TREATMENT OF SYPHILIS OF THE CENTRAL NERVOUS SYSTEM.*

By RICHARD W. HARVEY, M. D., San Francisco,
Instructor in Medicine, University of California Medical School.

TREATMENT OF SYPHILIS OF THE CENTRAL NERVOUS SYSTEM.

My object in presenting this paper is to discuss the treatment of lues of the central nervous system with the emphasis on vigor and thoroughness. We all know how discouraging has been the prognosis and how inadequate our treatment. I insist that we have lacked woefully in thoroughness of treatment, and in recognizing that every case of primary lues holds the potentialities of central nervous system lues; and it is in the early stage that we should begin treatment and force it hard.

How often has a primary sore, followed by secondaries, received a single salvarsan, sufficient to dissipate the rash, and a few inunctions or injections, with or without K. I.! The subject has interested me during several years' experience in the Nerve Clinic of the University of California Medical School, and I have gone over a large number of records to discover just how much treatment the average tabetic or cerebro-spinal luetic has received before seeking our aid. Fifty-three out of a hundred patients admitted a primary sore, ranging from four months to thirty-seven years before coming to us, the average being sixteen years. Of these, some described secondaries, but in all the histories the ratio stood twenty-nine to one hundred who had had secondaries. The great majority of primary infections occurred years before the Wassermann test was known, but seventeen patients out of a hundred had had the blood tested. Forty-five out of a hundred had been treated in some form or another ranging from cauterization to salvarsan; but not a single instance of treatment could be characterized as *vigorous, consistent,* and *adequate.* This is, indeed, startling! Is it any wonder that we who have treated nervous lues have followed a forlorn hope, and have thrown up our hands in despair of mastering the problem?

What is the reason for this acknowledged failure? We must look for it in our own negligence or carelessness or lack of far-sightedness. Perhaps, too, we have been swayed by the patient's indifference and have failed to secure his co-operation. It is true that the recognition of paresis and tabes as of syphilitic etiology is a comparatively recent development; but we find the tendency too free, even to-day with our knowledge of Noguchi's work, to neglect the luetic patient in early stages and to limit the treatment to a few doses of salvarsan and a little mercury. Economic conditions, of course, contribute to this delinquency. The patient regrets the loss of time and money in pursuing his treatment, and I regret that it is too true that many physicians with their knowledge of the disease and of its chronic, progressive nature, fail to take the time and trouble to explain the necessity for adequate treatment, and to strive for the patient's co-operation.

In examining the treated cases in my series, mixed treatment was recorded in the largest number, but fourteen out of sixteen received one year or less. Salvarsan was administered in thirteen cases out of a hundred, five receiving two doses, three receiving three doses, and one as many as nine doses. The greatest number of mercury injections received was forty-three. A single intraspinal treatment had been administered.

In tuberculosis the layman has some knowledge

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

of treatment: that it is hygienic, based on rest, fresh air, and food, that it requires much time, persistence, and considerable expense. Why cannot his co-operation be obtained in syphilis so that he may insist on vigorous, sufficient treatment!

Cases of rapid involvement of the nervous system following the primary should teach us to bear in mind the necessity for frequent clinical examinations. A case in our clinic developed paresis nine months after the initial sore. A case in my series showed forty-eight cells per cu. mm. in the spinal fluid three months following the chancre. A case admitting a chancre six months before, developed a facial paralysis, dizziness, and headache, and gave a +++ Wassermann in the spinal fluid. We know that the spinal fluid is positive in thirty per cent. of cases with secondaries. Any case giving a histroy of headaches and dizziness should lead us to examine for altered reflexes or changed sensations. We should be on our guard for symptoms of lassitude, nervousness, loss of weight, night sweats, fever, rheumatism, sphincter disturbances, and stomach trouble.

Treatment of syphilis of the nervous system should be controlled by frequent laboratory tests. The blood Wassermann should be done at six-months' intervals, and by the use of a simple antigen and a cholesterin reinforced antigen, the efficacy of treatment may be followed. With a cholesterinized antigen the blood in a treated case will remain positive long after it is negative with an alcoholic or acetone insoluble antigen. In examining the spinal fluids a diminished cell count and negative globulin is encouraging, but a progressively diminishing fixing power of the spinal fluid in the Wassermann test is of extreme value and interest in scientific treatment.

At the university we have found the colloidal gold test of very great value in diagnosis of central nervous system lues. In treatment, the curve remains very nearly constant in paresis, but in tabes and cerebro-spinal lues it changes progressively until it becomes negative. This point is of importance in differentiating paresis. The mastic test is of value in diagnosing luetic conditions of the spinal fluid, but is not so delicate as the colloidal gold.

The cases of paresis in this series came to us complaining of mental and general symptoms, such as, loss of memory, drowsiness, insomnia, failing health. The clinical findings were mental changes, tremors, Argyll-Robertson pupils, active reflexes, ataxia, and sensory changes. The blood in all cases was strongly positive. The spinal fluid was strongly positive, the cell count averaged under thirty-five, globulin positive, and gold chloride curve positive for paresis. In treating these cases we have been struck with the constancy of the positive colloidal gold curve, while the other tests have shown improvement. We feel that salvarsan and injections are the best treatment. The end seems to have been hastened in our patients treated with intraspinal injections. One of our patients, a tabetic, developed paresis while he was having most vigorous treatment intraspinally.

Forty-three cases in one hundred were tabes and twenty-seven cerebro-spinal lues. The usual complaints were pains, dizziness, and difficulty in walking. The clinical findings were Argyll-Robertson pupils, absent or lively reflexes, sensory changes, and positive Romberg. In a large majority of cases the blood and spinal fluid gave positive tests. We have had best results in diminishing symptoms by administering salvarsan, together with inunctions and injections of mercury. We have observed several of these cases for three years, during which time laboratory findings have become negative, but in most instances the symptoms have persisted or become worse.

Cases of cerebral lues or syphilitic meningitis with severe headaches, dizziness, and eye-muscle palsies have done best under salvarsan administered at weekly intervals. We have managed to secure the co-operation of several of these patients, and have followed the salvarsan with inunctions and injections after the signs of acute infection have subsided.

We have used the Swift-Ellis and Byrne methods about equally and with the same results. We have found intra-spinal treatment tolerated by most patients, but in some cases the reactions have been so severe that the administration has had to be discontinued. We feel this method is not justified except in cases with severe root pains and crises. In any event, administration should be controlled by repeated spinal fluid examinations. Numerous investigations have shown how the Wassermann, cell count, and globulin diminish under intra-spinal medication, and with this improvement occurs a lessening of pains and crises. This form of treatment should be given, however, only by men with proper laboratory facilities, and willing to spend the time and take the trouble to control their administrations.

CONCLUSIONS.

Vigorous and prolonged treatment of every case of syphilis is the best guarantee against involvement of the nervous system. The co-operation of the patient should be secured at the outset, he should have explained to him the chronicity of the disease and its dire results. In some cases it will be best to direct him to a clinic where the charges are small and the case can be observed continuously for a long period of time. Physicians away from the cities have the State Hygiene Laboratory at Berkeley for their Wassermann tests and laboratory work, so that the excuse can not be made, as it has been made to me in several instances, that a Wassermann was not done because of the expense and the lack of facilities. In the cases that have come to us at the University for treatment there has been a shameful lack of treatment. I desire in this paper to leave with you this one impression: that in a great majority of syphilitics treatment has been insufficient, that it becomes the duty of the physician to secure better co-operation in the patient, and that everything we do along educational lines will tend to prevent the development of nervous syphilis which presents such a discouraging outlook.

CONSERVATION OF CHILDREN.

By JOHN CRAWFORD, M. D., Santa Paula, Cal.

The death rate of children under five years of age in the United States is close to 300,000 per year. If our losses from the war were that great we would think it a great calamity, yet our children slip from us one at a time and we hardly miss them. There is no better time than now to talk about the conservation of our children. The lives of our men are being sacrificed, a goodly number of those who return, will return physically unfit, then what will we depend upon for the future strength of our Nation? The logical answer is that the babies of this generation are the citizens and soldiers of the next. In them lies our greatest hope, our greatest asset, and our Nation's future strength.

I have been in the practice of medicine more than thirty years, and during that time have seen many babies born, and die. Have seen more die than should have died under proper care and management. We know that the death rate among the poorer class of patients is too high, and yet to this class we look in large measure for increase in our man power which is being depleted so rapidly. If we are depending on the poorer classes to increase our man power, then our duty as physicians is to do every thing in our power to make their lives easier and better. The state tries in every way to give us better potatoes, corn, apples, and citrus fruit, and looks after our live stock, and farming industry, but what do we as a state or county do for our children? We have farm advisors, horticultural commissioners, bee inspectors, weight and measure inspectors, all drawing state and county salaries, while in Ventura county we do nothing for the betterment of our babies.

Mr. A is a man who has never added anything of value to our state or country, has lived a life of drunkenness and squandered his income by dissipation and riotous living. Reaching old age, the county takes him in, feeds and cares for him, and when he dies buries him. Mr. B is the father of six or eight children, sober, honest and industrious, yet poor, his wife broken down by hard work and the care of the children, never a day to call their own, the children know nothing but poverty and work from day to day in order to make a meager living; what does the state or county do for that man or his family? If the man was to die, the wife could draw a small state or county pension for the support of her family. If the rich and well-to-do people are not going to raise families, as statistics show, then it is their duty, and our duty to see that these poor children are taken care of. If we raise our children for the support and defense of our country, and our country has a right (which I think it has) to take our children, then it is the country's duty, and the state's duty, and our duty, as physicians, to do everything in our power to make those children as nearly 100 per cent. efficient as we know how. Now how can this be done in order to save more of our babies, and make them better men and women for our country?

First, I would give every needy mother a pension for the care and support of her children up to a certain age. I would pension according to the number of children, making the pension for the first two or three very small, and increase as the number increases. In that way the poor people would be assured of some protection and care for their children, and it would eliminate to some extent the dread of child-bearing. The pension system would make better men and women, increase our man power, place us more on an equality, give us better education as a nation, and would eliminate a great deal of poverty, illiteracy and crime, as crime is often the result of poverty.

In the second place every town should be provided with a small cottage children's hospital, where a sick child could be taken and cared for at the minimum of expense. A ward should also be arranged where the mother could take her child and care for it herself, under the instruction of a good nurse, whose duty it should be to see that the mother fully understood the physician's orders, and followed them. Such a home could be arranged at moderate expense, and any deficiency in the management could be met by the county.

Thirdly, each county in the state should have a dietetic nurse. In Ventura county she should be able to speak Spanish as well as English. Her duties should be to go over the county, the same as the farm advisor, and give practical demonstrations on the preparation of food for the children, the care and handling of milk, bottles and nipples, bathing and care of babies, and the danger of contaminations by flies and filth. Whenever we get the mothers educated to give their children proper food and care, and to segregate sick children from well, and to properly quarantine contagious diseases, and convince them of the danger of exposing their children to contagions, a great part of the conservation of children will be accomplished. An ideal way for the nurse to travel would be by an atuomobile converted into a truck, with a cabinet kitchen built on, completely furnished with all necessary equipment, including a gas stove. By such an outfit she would have an independent way of travel, and would always be supplied with necessary equipment for her demonstrations. The effect of such an education on the young women of the country would soon be shown by the death rate of our babies. Many of these women are ignorant, but they want to, and will learn if given an opportunity.

Fourthly, a committee of three physicians should be appointed by the president of this society, to get up a little pamphlet, to be printed both in English and Spanish, for the expectant mother, and the care of her child.* This pamphlet should be signed by the Ventura County Medical Society, also countersigned by the physician giving it out. At the time of birth, a complete record of the child should be made by the attending physician, as to name and nationality of parents, sex, weight, length, and general physical condition of the bones, spine, lungs and heart, in duplicate, one for the

* See editorial September issue on Child Welfare.—Editor.

mother and one for the physician. Every three months thereafter the mother should bring the child to the physician for a thorough examination, for the condition of growth, development of muscular system, the bones, lungs, heart, throat and digestive organs, spine and mental condition of the child, should be registered, once more in duplicate, one for the mother and one for the physician. This should be continued until the child is at least six years old. The advantage of a duplicate registration would be for the mother, if she changes her location, or changes physicians. By keeping such a record, it would show the mother, as well as the physician, the growth and condition of the child, and stimulate more of an interest in its welfare. It would also enable the physician to keep in better touch with his patients. The birth of the child should be promptly put on record, also the death, for only by comparison is our success or failure known. The child at some time during the first year should be vaccinated, and, if a male having a long prepuce, should be circumcised, for elimination of diseases as well as for cleanliness. By so doing we will have taken a long step toward the conservaton of our children.

DIVERTICULA OF THE FEMALE URETHRA.*

J. CRAIG NEEL, M. D., San Francisco.

The importance of diverticula of the various viscera has been especially emphasized during the last few years. While some structures are thus affected more frequently than others, there are authentic cases on record in which sacculations have formed in practically all the hollow viscera.

By urethral diverticula or pouches, we mean cavities of larger or smaller size which communicate with the urethra and at times contain urine. In general, they may be classified into true diverticula and false diverticula; the former are lined with urethral mucosa while the latter have no definite lining membrane but extend into the paraurethral tissues.

In 1867, Priestley[1] published a typical case and gave an excellent description of the clinical history. When his patient was eight months advanced in pregnancy, a swelling appeared at the orifice of the vagina, which was not very sensitive to touch, but was attended by forcing pain, and a sense of something about to protrude. When labor came on, a soft tumor, like a small egg, was found attached to the neck of the bladder, and projected into the vagina. Although all possible care was exercised in supporting it during the passage of the foetal head, the pressure to which it was subjected had the effect of bursting it, and a quantity of thick fluid was discharged by the urethra. No further discomfort arose from it at the time, beyond some slight irritation of the bladder; but when she began to go about again, the swelling reappeared as before, and from time to time discharged a quantity of semi-puriform matter.

"On examination, an elastic swelling of the size of half a hen's egg was found lying in the vaginal orifice. It was not unlike a cystocele, but was rounder in form, with a narrower base and it was attached not to the bladder, but to the posterior wall of the urethra. On squeezing it, a mixture of urine and pus flowed from the urethra to the extent of half an ounce, and the swelling collapsed. On passing a probe along the urethra, it passed first into the bladder but by a little manipulation, it entered a small orifice leading to the cyst and the point was felt in the cavity of the cyst through the anterior vagina wall. The tumor did not form again until the next time for emptying the bladder, when a portion of urine always passed into the cavity, which seemed like a diverticulum in the course of the urethra." Temporary relief was obtained by the use of an especially designed pessary.

Two other cases were reported by Priestley; one in which sebaceous-like material was discharged from the urethra; and the other one presented a cyst in the anterior vaginal wall, directly under the urethra but showed no communication with it. He considered their origin to be from pre-existing glandular structures of the urethra.

In 1875, Lawson Tait[2] reported one case in which the diverticulum was excised and found to be lined with mucous membrane. Also, in 1885,[3] he reported three other similar cases. Regarding the etiology, he states: "The first, and I think the most likely of these is that there is, as the origin of this condition, an error of development by which a small off-shoot of the urethra, like a diverticulum of the intestine, is the result of faulty union of the perineal folds, and that this becomes of pathological importance when women become accustomed to those errors of urination to which they are all more or less addicted. The second explanation is that this urethrocele is formed by the union between the urethra and a cyst of pathological origin in the roof of the vagina. But I am disposed to regard the former as the more likely of the two from the extraordinary similitude which all my four cases have presented and from the fact that I have never seen any cysts at all like them in a position that such a communication with the urethra might take place."

Routh,[4] in reporting three cases, says: "Their etiology seems to be (1) closure of the ducts of pre-existing urethral glands, retention cysts resulting. Suppuration and ulceration into the urethra by a small, often valvular hole follows and the inflammation is kept up by urine trickling into the sac at each micturition; (2) blood cysts that have passed through similar changes; (3) the formation of pseudo-cysts by injury to the urethral floor during labor or menstruation."

Braxton Hicks had seen five cases. In one case, the cavity was filled with phosphatic concretions. He opened the cavity in each case and kept it open until the urethral opening closed, which usually occurred after a short time. Winckel[5] records two cases which he thinks were due to inflammation of the urethral lacunae. In one of these, the walls of the cyst consisted of muscular tissue and the inner surface was lined with pavement epithelium.

In 1906, Watts[6] reviewed the cases of urethral diverticula in the male and was able to collect sixteen cases from the literature. Of these cases, nine were under five years and only five were over

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

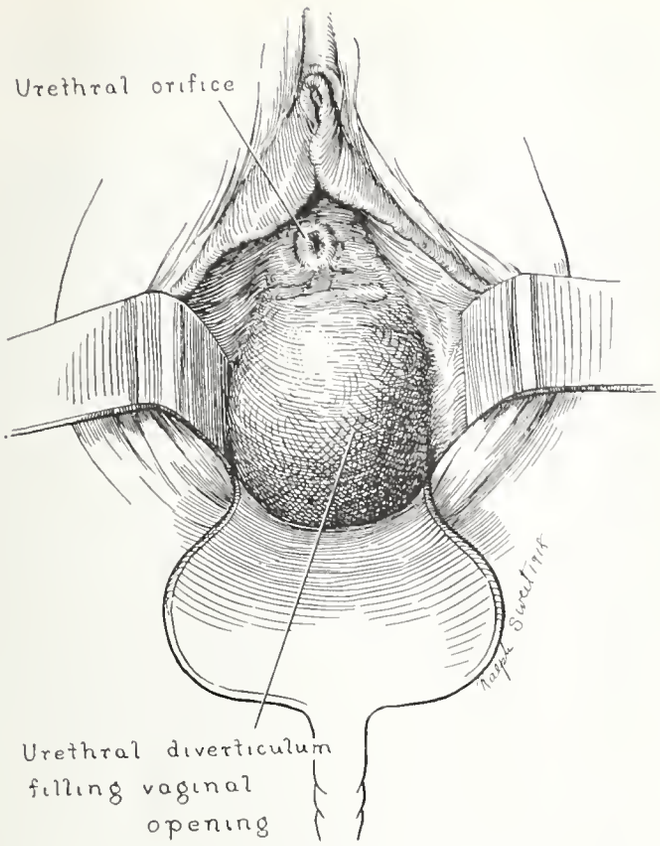


Plate I.
Appearance of Diverticulum Before Operation.

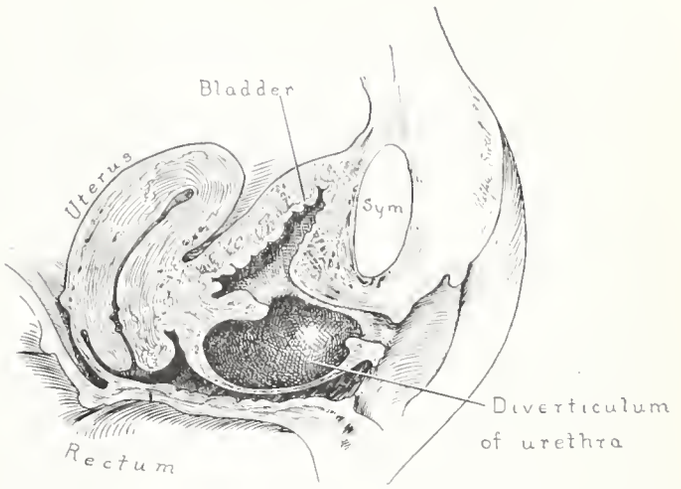


Plate II.
Sagittal Section of Diverticulum, Showing Location and Extent of Involvement of Posterior Urethra.

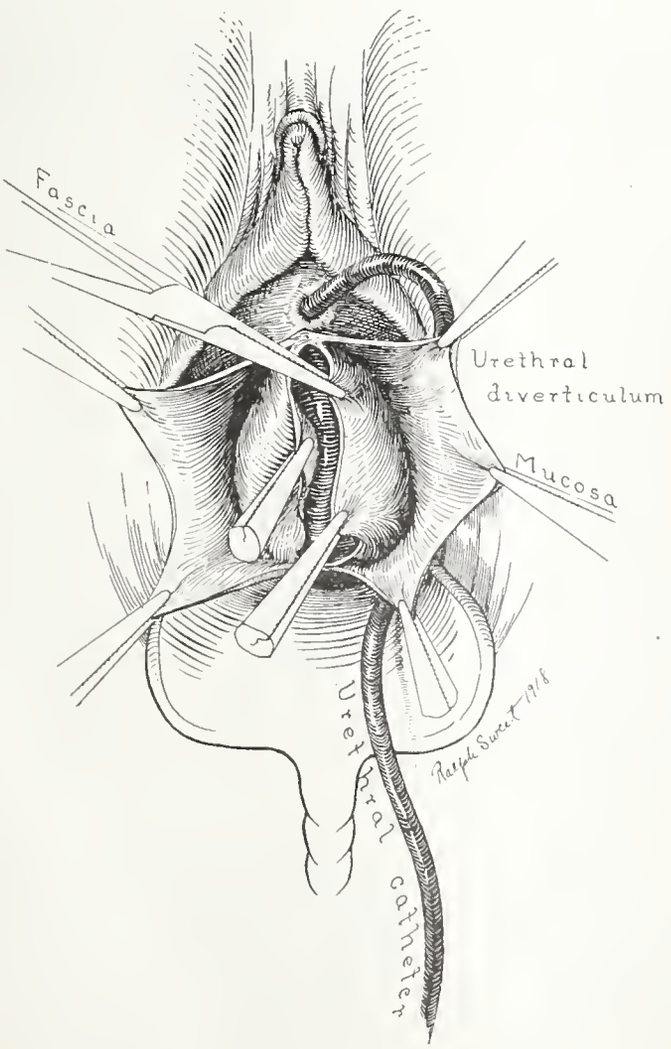


Plate III.
Separation of Perineal Fascia from the Mucosa of the Anterior Vaginal Wall.

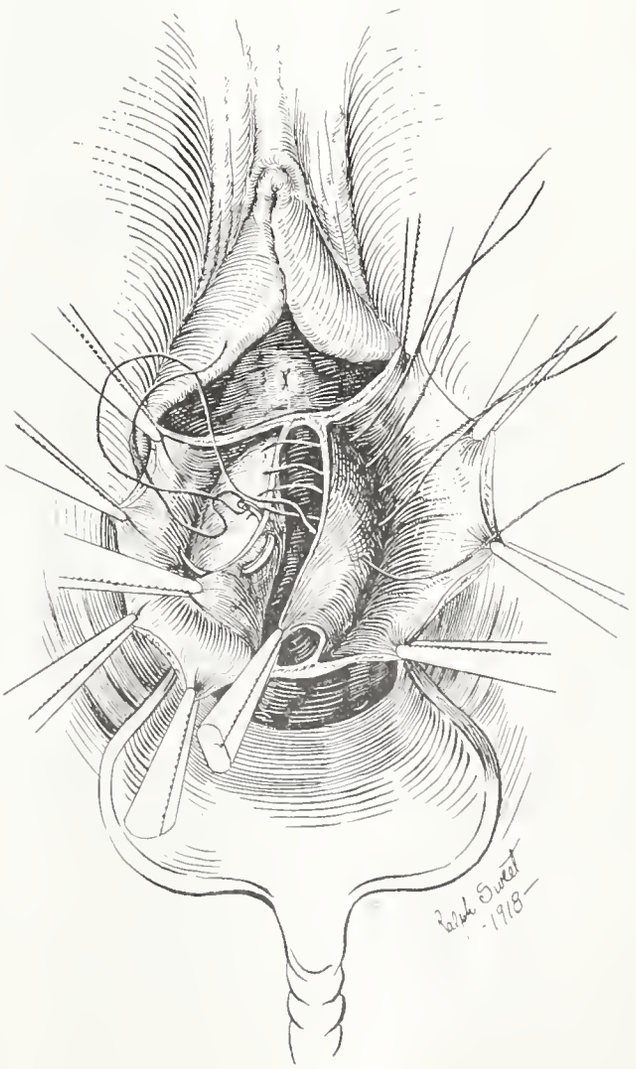


Plate IV.
Method of Overlapping the Fascia.

fifteen years of age. He states that the etiology of the congenital type is not definitely known but from a study of the cases of the literature, valves of the urethra seem to be of secondary importance. Suter[7] concludes that congenital diverticula are due to faulty development in which epidermal pockets communicate with the inferior wall of the urethra.

The etiology of acquired diverticula is varied and may be due to urethral calculus or stricture, perforation of the urethra, etc.

The following case presented some unusual features: Mrs. E. K., aged 36, married, referred by Dr. Reginald Knight Smith, complaining of total incontinence of urine. Her past history was entirely negative; there was no history of genito-urinary infection. When first examined by Dr. Smith, she was eight months pregnant and on vaginal examination, a soft tumor mass was seen presenting at the vaginal orifice. This mass was about the size of a hen's egg. There was no tenderness but pressure caused the escape of muco-purulent material from the urethra which showed no organisms on careful microscopic examination. During the last two months of pregnancy, there was an escape of urine on coughing. The patient was delivered at term of a normal child by low forceps on account of the prolonged second stage. There was no apparent perineal tear. The patient had not borne children previously. The puerperium was entirely normal but on leaving her bed, there was a constant dribbling of urine.

On cystoscopic examination three weeks after delivery, the urethra readily admitted a number ten Kelly cystoscope, and the bladder wall was found to be entirely normal. The internal urethral orifice was about twice normal size and gradually blended with a sacculation of the posterior urethral wall extending to within one centimeter of the external urethral orifice. The lining membrane presented the same appearance as the urethral mucosa.

Upon vaginal examination, the contents of the tumor mass could be readily expressed through the urethra and by invagination of the cyst wall, the index finger would pass directly through the defect in the posterior urethral wall and the internal urethral orifice into the bladder.

Operation.—Under gas and oxygen anesthesia, a median line incision was made through the anterior vaginal mucosa and the underlying fascia to the wall of the diverticulum. This incision was carried backward sufficiently to expose the neck of the bladder. The diverticulum was then dissected free from the anterior vaginal wall and the internal urethral orifice reduced to normal size by the introduction of mattress sutures of silk as described by Kelly.[8] On account of the extensive defect of the posterior urethral wall, complete excision of the diverticulum seemed to be contraindicated. The walls of the diverticulum were very thin and were readily invaginated into the urethra by two rows of running mattress sutures. The fascia were then separated from the vaginal mucosa and overlapped after the method described by me[9] before this section one year ago. The excessive mucosa was then resected and the cut edges carefully approximated.

The patient made an uneventful recovery and left the hospital at the end of ten days. Since operation she has remained entirely well.

The important feature of this case was the extensive defect of the posterior urethral wall which had undoubtedly extended through the internal urethral orifice during the process of delivery.

Bevan[10] has recently reported a similar operation for diverticula of the esophagus with excellent results.

Englander[11] has recently reviewed the various theories advanced to explain the etiology of congenital diverticula in the male and arrives at the following conclusions:

"Congenital diverticula may be due to any one of the several causes, and the theories of epithelial rests advanced by Suter, the theory of defect or weakened corpus spongiosum as advanced by Kaufman and others, or the theory of congenital obstruction as advanced by Watts, are in the main correct, the various authors encountering a case or cases that they believe prove their contention.

"Diverticula may be the cause of persistent urethral discharge, whether specific or otherwise, and sometimes when infected may become a menace to life, may cause serious urinary obstruction, cystitis, pyelitis, and pyelonephritis.

"While diverticula of the urethra are much rarer than bladder diverticula and can usually be recognized easily, there are some cases in which there is no tumor evident and only a casual urethroscopic examination or one for a persistent urethral discharge will discover it."

The case reported above I believe to be of the congenital type because of the following reasons: (1) the absence of urinary infection, or injury; (2) the insidious onset without pain or tenderness; (3) the extensive defect of the posterior urethral wall; (4) the appearance of the lining membrane; (5) and the absence of any urinary obstruction.

The recognized treatment in the past has been total excision of the sac; this, however, was usually followed by urinary fistula, which frequently required a second operation for closure. Excision of the diverticulum in this case would have necessitated the removal of at least one-half the posterior wall, which would have made closure with primary healing extremely doubtful. The contraction of the invaginated walls soon takes place and the imbrication of the overlying fascia gives excellent support without disrupting the urinary tract.

Literature.

1. Priestley, W. O. Brit. Med. Journ., 1869, VII.
2. Tait, L. Lancet, London, 1875, II.
3. Tait, L. Brit. Med. Journ., 1885, I.
4. Routh. Brit. Med. Journ., 1890, I.
5. Winckel, quoted by Bagot. Med. News, 1895, LXVII.
6. Watts, S. H. Rep. Johns Hopkins Hosp., 1906, XIII.
7. Suter. Arch. f. klin. chir., 1908, LXXXVII.
8. Kelly, H. A. Surg. Gyn. and Obst., 1914, XVIII.
9. Neel, J. C. California State Journ. Med., 1917, XV, p. 121.
10. Bevan, A. D. Surg. Clinics, Chicago, 1917, I, pp. 449-457.
11. Englander, S. Journ. A. M. A., 1917, LXVIII, pp. 351-354.

Prof. T. N. Carver, of Harvard University, says: "Anyone who, in these days of impending doom, buys anything which he does not need for his health, strength, or efficiency is hiring some one to do something which is unnecessary. He is hiring some one to stay out of the essential industries. He is competing with the Government for materials and man power which it needs to win the war and preserve the liberties of mankind."

RADIUM IN THE TREATMENT OF UTERINE CANCER WITH CASE REPORTS.*

By REX DUNCAN, M. D., Los Angeles.

When we consider that more than 25% of the cases of cancer of the uterus are so advanced as to be inoperable when seen by the surgeon, and that more than 60% of those operated have recurrences, we are confronted with a serious question as to the treatment of these cases comprising a large majority of the total. The Percy Cautery, with a high immediate mortality and marked constitutional disturbance, together with the frequent and serious complications, hemorrhage, sepsis, vesicovaginal and rectovaginal fistula, etc., and with practically no cures and slight palliative effect, has little to recommend it in advanced cases. Personal experience and a careful review of the literature fails to offer anything from X-ray therapy even equal to the cautery as a palliative or curative agent in pelvic cancer. It is then, with considerable encouragement, that we review the results accomplished with Radium.

The writer has treated more than 50 cases of uterine carcinoma. Reported here, are 31 consecutive cases treated during the last two years and previous to the past six months.

Dose and Technique: A better understanding of the changes following the application of Radium, and an opportunity to observe the results of treatment in a large number of cases, have led to improved technique of application and more accurate dosage. Complications which occurred early in the use of Radium are always avoidable and occur now only as a result of improper technique and inexperience.

The majority of those who employ Radium in the treatment of pelvic carcinoma advocate the use of from 50 to 150 mgrms. The character and extent of involvement will determine the dosage necessary. I have obtained the most satisfactory results employing approximately 100 mgrms., although I find occasional cases in which I use larger amounts. The Radium must be so screened that the Alpha and soft Beta rays are absorbed by filtration. For this purpose, I use 0.5 of a mm. of platinum and 1 mm. of brass, covered with gauze and pure rubber gum tubing to absorb the secondary rays. When possible, the applicator should be placed within the uterine canal. It is necessary to secure an accurate approximation of the Radium to the involved area, and desirable to protect uninvolved tissue, especially the posterior vaginal wall and rectum when not involved (See Figs. No. 1, 2, 3, 4). The length of application and frequency of application will depend upon the general and local conditions, and the immediate reaction, as well as the amount of Radium employed. Constitutional disturbances, resulting from rapid absorption of the growth, frequently render it desirable to limit the applications of the Radium to from 12 to 18 hours at each application. This constitutional disturbance subsides, however, within from 12 to 24 hours after removal of the Radium, when the treatment may be resumed at intervals of one or two days, until a total of from 30 to 60 hours, or 3000 to 8000 milligram-hours, has been given. Additional treatment, after 6 or 8 weeks, is frequently desirable to hasten the destruction of any remaining involvement, or as a prophylactic measure when no evidence of involvement remains.

A thorough understanding of the patient's general physical condition and the character and extent of local involvement is essential as a basis for determining dosage. Favorable results, without any immediate or remote dangers, can only be obtained when proper dosage and perfect technique are employed. Strict asepsis is essential.

The theory of the treatment of cancer by Radium is based on the well-known fact that cancer tissue is more susceptible to Radium radiation than are normal tissues. This has been demonstrated repeatedly in our laboratory and the literature is abundant with reports of such studies.

Janeway and Ewing (11) by an elaborate and extensive miscroscopical study of the effect of Radium upon normal epithelial cells and carcinoma cells have shown that approximately one-fourth the dose required to destroy normal epithelial cells will cause a permanent destruction of the carcinoma cells.

The histological changes which occur in the cancer tissue under the influence of the rays from Radium have been thoroughly studied by numerous observers. We have made microscopical studies of sections removed at different intervals after treatment in a large number of cases and observed the histological changes to be as follows:

Within 5 to 7 days there results a hyperemia of the tissue, exudation of lymphocytes and polymorphonuclear leukocytes and swelling of the cells. Atypical mitosis is observed. In the second week, the nuclei are swollen, homogeneous and hyperchromatic, and there is an enlargement and vacuolation of the cancer cells, and fusion giant cells form. In the third week, the number of cells rapidly decreases and many undergo a granular degeneration and absorption. During the fourth week, only cell and nuclear debris and occasional giant cells are visible, or no traces, whatsoever, remain. There is a simultaneous activity and proliferation of the stroma. The blood vessels are obliterated by a swelling and proliferation of the intima. On the surface, there occurs a formation of granulation tissue which is later covered by epithelium, completing the repair.

Radium induces the absorption of living tumor cells, which Lazarus-Barlow believes may establish a true immunity against their growth. The most pronounced traces of artificial immunity produced against tumors of animals are by the absorption of living tumor cells in the body.

In addition to the influence of the rays upon the neoplastic elements, the endothelial lining of the blood vessels is caused to swell, thereby obliterating the vessel, the connective tissue contracts and, as a result, lymphatics and smaller blood vessels are permanently blocked, and the dense scar produces a condition of starvation of the growth.

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte April, 1918.

Gross tissue changes are evident after 5 to 7 days. There is less tendency to hemorrhage from trauma. The growth becomes less fungous, more firm, and smaller, and induration into adjacent tissues gradually decreases. In operable cases, the cervix gradually resumes its normal appearance, and the uterus becomes smaller and less fixed. The tissue changes occur by gradual absorption of the neoplastic elements and rarely is there any sloughing of tissue. I wish to repeat here that the tissue changes in no manner resemble those produced by the cautery, caustics or similar agents.

In treating smaller areas of involvement, there will result some inflammation of the surrounding tissue after 7 to 10 days, which gradually subsides in from 1 to 2 weeks. The involved area is gradually absorbed and may be covered with a grayish membrane, remaining for several weeks. By proper technique of application, and after-treatment, atresia of the vagina can be prevented and the uterine canal caused to remain patulous. This greatly facilitates later treatment if necessary. Gross changes vary greatly, depending upon the character of the involvement.

Hemorrhage is almost immediately arrested and there is a prompt and rapid decrease in the odorous discharge. A marked improvement in the blood picture and general condition of the patient is observed within 2 or 3 weeks.

RESULTS FROM TREATMENT.

Before discussing my personal cases, I wish to refer briefly to a review of recent literature.

The uniformly good results, reported by various authors, resulting from the proper application of sufficient quantities of Radium in appropriate cases, are very encouraging. The number of cases treated, clinical cures effected, with the time elapsed since treatment, is shown in Table No. 1.

By "Clinically Cured," is meant an absence of all clinical and anatomical evidence of involvement. Many cases, not so reported, received marked palliative effect.

Risley and Leland (9) report excellent results from the application of Radium in borderline cases to render them operable, and as prophylactic following hysterectomy in operable cases. A high percentage of cures, and excellent palliative results, are also reported in a large number of recurrent and inoperable cases treated.

K. Warnekros (10) reports from their Berlin clinic during the years 1911 to 1914, 174 cases of uterine cancer, which were operated and discharged as primarily cured. Of these, 119 received no prophylactic Radium, 66 died of recurrence, 2 were not traced, and 51 were free from involvement, making 55% recurrences. Of the 55 cases that were operated and received prophylactic Radium, 11 died of recurrence, and 44 were clinically cured, leaving only 18.5% recurrence.

Kelly (2) reports 10 cases operated that received prophylactic Radium with all, or 100%, clinically well; 3, six months; 4, one year; 1, two years; and 2, three years, after treatment.

The number of early or operable cases reported in which Radium alone has been employed are too few from which to draw conclusions, although the results are very striking. Kelly (2) reports 4 cases, all having remained well; 2, after more than two years; and 2, after more than three years. Ranshoff (3) reports 3 cases; 2, clinically cured after more than one year; and 1, after more than two years.

In reporting the following cases, I regret that time will not permit me to present abbreviated individual case reports. Included, are 31 consecutive cases. More than 20 other cases treated during the past 6 months, although showing excellent primary results, are not included, being too early from which to draw definite conclusions.

Operable Carcinoma: I have treated but one case in which the involvement was limited to the cervix, and could be considered operable from a surgical standpoint. General conditions, rendering the patient a poor surgical risk, contraindicated surgery. This patient was a multipara, 32 years of age, in which microscopical section showed cuboidal cell carcinoma of the cervix. Prompt disappearance of the involvement resulted from the application of Radium, and more than 20 months have elapsed without any evidence of recurrence.

Inoperable Carcinoma Uteri: Of 10 cases treated, 5 or 50% are apparently cured and free from any clinical or anatomical evidence of involvement. Two are dead, 8 and 12 months after treatment. Three are classified as alive, with involvement; of these, 1 has extensive intrapelvic involvement; 1, although apparently free for several months, has developed a recurrence in the rectum, with intrapelvic involvement; and 1, apparently free, developed a small local recurrence, which, with further Radium treatment, has disappeared, more than 3 months since, and the patient is now enjoying splendid health. These cases, of which 60%, including the last case above mentioned, are apparently cured, all had originally extensive involvement of the uterus and vaginal walls, with probable extension into adjacent tissues. Prompt and marked improvement in the local condition and general health was evident in nearly all cases treated.

Recurrent Carcinoma: Of the 20 recurrent cases treated, 18 had had simple or radical hysterectomy, and 2, Percy Cautery. The average time elapsed between operation and recurrence was approximately 6 months. Various palliative methods, including cautery, acetone, x-ray, etc., had been previously employed for the recurrence in 8 cases. Five cases were terminal cases, and in 3, the inguinal glands were involved. Nine cases had distinct pressure symptoms from intrapelvic involvement.

The results from treatment were as follows: (See Table No. 2.) Twenty cases were treated. Six, or 30%, are clinically well; 2, after more than 6 months; 1, more than 7 months; 1, more than 12 months; and 1, more than 20 months. Nine cases are dead, having lived 4 to 15 months, or an average of 7 months, after treatment. Five cases are improved or classified as alive, with involvement, from 7 to 16 months after treatment. Of these, one case, free for several months, had a

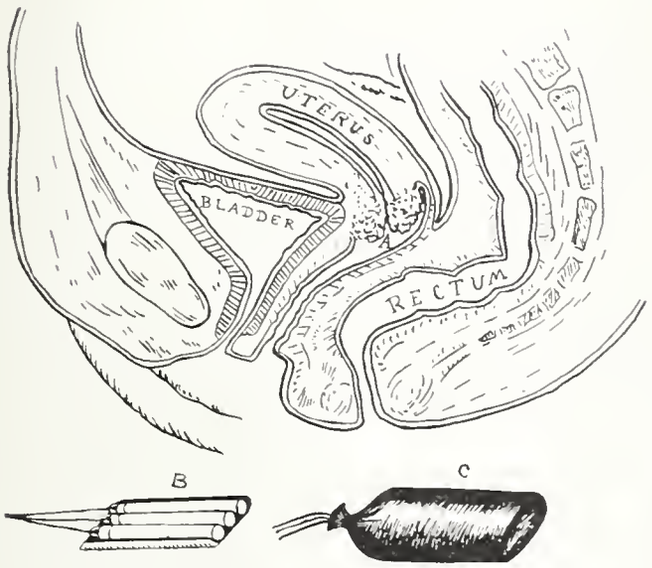


Figure I.

A. Carcinoma of the cervix involving the anterior vaginal wall.

B. Screened Radium tubes on 2 mm. of lead to protect posterior vaginal wall and rectum.

C. Same as "B," covered with gauze and finger-cot, ready for application. (Actual size.)

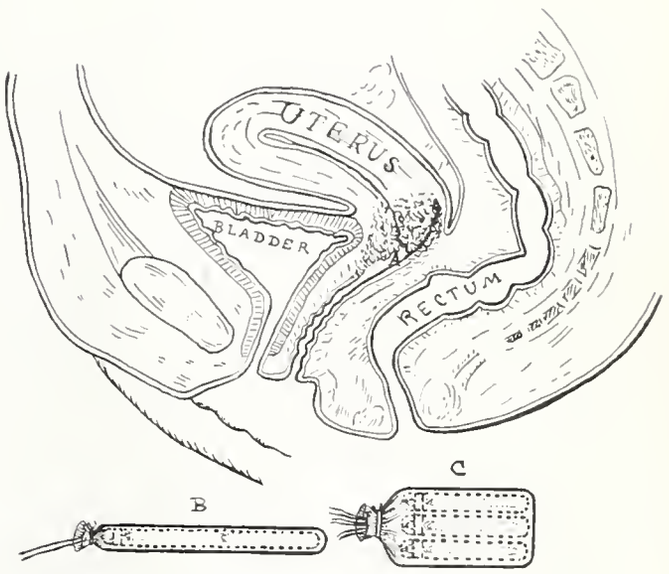


Figure III.

A. Carcinoma of the cervix involving the vaginal walls.

B. Diagram showing Radium tubes, screened with platinum and brass, covered with pure rubber-gum tubing, for insertion into uterine canal. (Almost actual size.)

C. Radium tubes, screened with platinum and brass, covered with gauze and finger-cot, for application within the vagina. (Almost actual size.)

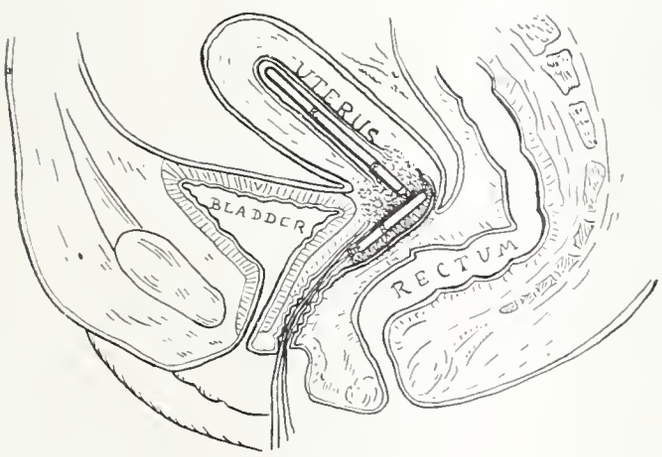


Figure II.

Diagram showing Radium tube in uterine canal, and vaginal applicator against cervix and anterior vaginal wall, held in place by vaginal pack, rectum protected with 2 mm. of lead and packing.

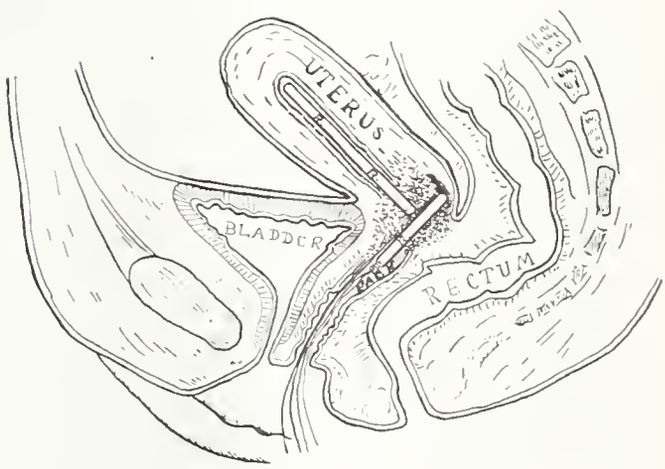


Figure IV.

Diagram showing Carcinoma involving the cervix and vaginal walls, with Radium placed within uterine canal and vagina, held in position by vaginal pack.

TABLE NO. 1.

INOPERABLE AND RECURRENT CARCINOMA OF THE UTERUS.

Reported by:	Total No. Treated	Clinically Cured	Remaining well after more than: 6 mo.	1 yr.	2 yrs.	3 yrs.	4 yrs.	6 yrs.
2 Kelly, H.	203	57	15	24	5	4	3	1
3 Ranshoff, J. S.	22	8	2	4	2			
4 H. Cheron & Rubens-Duval	158	46	24	22	(17 could not be traced).			
8 Schmidt, H.	62	22	Time elapsed after treatment, 2 to 24 months.					
5 Doderlein	153	31	Reported only those well after more than 1 year.					
6 Werner, P.	102	14	Reported only those well after more than 3 years.					
7 Maiolo, C. G.	42	16	Reported only those well after more than 1 year.					
12 Recasens, S.	126	72	Interval since treatment, 2 yrs. in 27 of 47 cases, and over 1 yr. in 45 out of 79 cases.					

Table Showing Types of Cases Treated, Number of Each, and Results Accomplished.

TABLE NO. 2.

CARCINOMA UTERI.

	Number Treated	Dead	Improved	Clinically Well No.	%	Months elapsed since Treatment 6	7	8	9	12	15	20
Operable	1	0	0	1	100%							1
Inoperable	10	2	3	5	50%	1	2		1	1	1	
Recurrent	20	9	5	6	30%	2	1	1		1		1
Total	31	11	8	12	38.7%	3	3	1	1	2	1	2

Table Showing Results, with Time Elapsed After Beginning Treatment, in All Cases.

TABLE NO. 3.

CARCINOMA UTERI.

	No.	%	Months elapsed after beginning treatment. 4	6	7	8	9	10	11	12	14	15	16	20	Average
Dead	11		1	2	2	2		1		2	1				8 mos.
Improved	8	25.7%		1	4				1	1			1		
Clinically Cured	12	38.7%		3	3	1	1			2		1		2	

small recurrence, which has apparently yielded to further treatment.

The favorable and palliative action of Radium in these cases was truly remarkable. Hemorrhage and odorous discharge were arrested, pain relieved, and the general condition of the patients remarkably improved.

The above cases represent a considerable variation in the character and extent of involvement. In some cases, there was present a large cauliflower mass involving the cervix and adjacent vaginal walls; in others, very little new growth, but marked infiltration of the vaginal walls and the broad ligaments, with fixation of the uterus. Results are more striking in the vegetative type, with which there is usually greater hemorrhage and discharge and more marked toxic symptoms. I have found that a definite prognosis cannot be based upon the apparent involvement, as some cases, with extensive involvement and marked constitutional disturbance, yield more favorably than other cases, apparently more promising. Induration of the broad ligaments and fixation of the uterus does not necessarily preclude a satisfactory result, as several such cases are now apparently well, some time after treatment. Pressure symptoms and involvement of the inguinal glands renders the prognosis less favorable. Great care in regulating the dosage in advanced cases is necessary and treatment at various intervals over a period of several months, often yields results in the most unpromising cases.

Notwithstanding the apparently greater local involvement present in the majority of inoperable cases treated, the results, both immediate and remote (See Table No. 2), are more favorable than in recurrent cases after panhysterectomy, in which there was apparently much less involvement.

One cannot see a considerable number of cases of carcinoma of the uterus without being impressed with the absurdity of surgical treatment of those cases in which the character and extent of involvement precludes a reasonable possibility of removing all involved tissue. Unquestionably many cases are operated that would live longer, and more comfortably, if left entirely alone. Greater discretion on the part of the surgeon in eliminating inoperable cases, and the treatment of these cases earlier with Radium, would unquestionably yield far more favorable results in the treatment of uterine cancer.

CONCLUSIONS.

Greater care and judgment should be used in determining the operability of uterine cancer.

Radium should be employed:

First, as a prophylactic immediately after hysterectomy in operable cases;

Second, to render borderline cases operable, and preliminary to surgery in operable cases;

Third, as a curative and palliative agent in inoperable cases;

Fourth, as a curative and palliative agent in recurrent cases; and,

Fifth, in any case where the general condition of the patient contraindicates major surgery.

Radium not only relieves the pain, arrests hemorrhage and odorous discharge, but indirectly also improves the general health of the patient, and prolongs life. These curative and palliative results may be obtained with Radium, without any im-

mediate, or remote, danger, provided proper dosage and technique, and strict asepsis, are employed.

The results of Radium Therapy in inoperable and recurrent carcinoma of the uterus surpass those of any other known therapeutic agent.

Bibliography.

1. Ewing: Jour. A. M. A., Vol. LXVIII, No. 17, p. 1238.
2. Kelley, H.: Am. Jour. Surg., 1916, XXX, 73.
3. Ranshoff, J. & J. S.: Am. Surg., 1916, LXIV, 298.
4. H. Cheron & Rubens-Duval: Strahlen Therap., 1914, No. 1.
5. Doderlein: Zentralbl. F. Gynak., 1915, p. 185.
6. Werner, P.: Arch. F. Gynak., 1916, CVI, No. 1.
7. Maiolo, C. G.: Am diostet. e gines, Milano, 1917, XLI, 99.
8. Schmitz, H.: Surg., Gyn. & Obst., 1916, XXXIII, No. 2, p. 191.
9. Risley, E. H., & Leland, G. A.: Boston M. & S. Journ., 1917, CLXXVII, 891.
10. Warnekros, K.: Monatscho. J. Gebnotsh. U. Gynak., 1916, XLIV, No. 4.
11. Janeway, Henry H.: Ra. Ther. in Ca. at the Memorial Hosp., New York, first report 1917, p. 46.
12. S. Recasens: Arch. Mens. d'Obst. et de Gynec., 1917, VI, No. 2, p. 34.

822 Investment Building.

THE X-RAY TREATMENT OF UTERINE FIBROIDS.*

By HENRY J. KREUTZMANN, M. D., San Francisco.

The Secretary of the Gynecologic Section, Dr. Alfred Baker Spalding, suggested to me to present a paper on X-ray treatment of fibroids of the uterus at this meeting; and in response to this suggestion, I have the honor to make the following report.

Before I begin my paper proper, I have to offer an apology for making to you, surgeons as most of you are, a plea for non-surgical treatment of uterine fibroids. I am quite aware that in the last decades the operative procedures for the eradication of this ailment have been rendered extremely safe and simple; I have myself operated upon several hundreds of such cases; yet I felt quite interested in this most modern treatment for various reasons, and I shall render to you a short account of my valuation of this mode of treatment based on my own observations.

The number of fibroids of the uterus (fibromyoma uteri) that I have seen during my professional life is quite large, and I have always looked upon these tumors as non-malignant neoplasms, in distinct contra-position to sarcoma, carcinoma and cystoma, malignant neoplasms. Fibroids of the uterus do not endanger the life of the bearer in the way that sarcoma, carcinoma and cystoma do; there is no spreading to neighboring organs; no metastases to remote organs; no general affection of the system, as expressed by the cachexia of patients suffering from malignant disease.

It is the symptoms induced by the presence of fibroids of the uterus, notably pressure and hemorrhages, that will at times cause suffering and put the life of the bearer in danger.

When I was attached, years ago, to a large hospital where every fatal case was autopsied, fibroids of the uterus, sometimes of considerable size, were not infrequently found in women who while alive had absolutely no signs or symptoms that could be referred to them. Every once in a while, when we examine a pregnant woman or after delivery, we find a fibroid present; yet no symptoms had been noticed prior to our examination. The same experience we have on opening the abdomen for adnexal or other disturbances; we find a fibroid of the uterus, yet there were no symptoms traceable to its presence.

In quite a large number of cases of sterility (and sterility in perfect health brought the patient to me), I discovered fibroids of the uterus, which had been there in all probability for years. In all my life I have not seen a single woman succumb to fibroids of the uterus prior to operation.

Fibroids, sometimes of considerable size, will either disappear entirely, or become greatly reduced after delivery.

I have seen a number of women with uterine fibroids enter the menopause; I had occasion to examine these women at different times, and I found in the atrophic, senile uterus, either no trace of a fibroid at all, or small marble-like protuberances, even in women where fibroids of considerable size had formerly been present.

It is important to lay stress on these statements of non-malignancy of the uterine fibroid, because the doctrine has been promulgated and altogether too readily accepted, that a fibroid uterus, whenever found, should be operated upon.

The operation usually performed is hysterectomy; and if we take into consideration the operative mortality ranging from 3 to 5 per cent., the days of more or less suffering right after operation, and the period of invalidism following, we must admit that there exists great disproportion between the severity of the remedy and the rather harmless pathologic condition.

This consideration has induced many physicians to look for other than surgical treatment of uterine fibroids. Many drugs and many methods of treatment have been tried; but with the wonderful progress of abdominal surgery, they have all been discarded.

In the last few years, however, Roentgen rays, and the rays of radio-active substances have been employed with ever-increasing frequency, and in the practice of many gynecologists actinotherapy, raying, has almost entirely supplanted operations for uterine fibroids.

It has been claimed by the opponents of ray therapy that the result of X-rays is nothing more or less than castration—they call it Roentgen castration. This theory is not correct. There is action on the fibroids themselves besides action on the ovaries. I have seen time and again fibroids diminish in size under Roentgenization, while the patient was still menstruating. Roentgenization is therefore not merely symptomatic therapy, but etiologic as well.

So far I have treated twenty-four cases of uterine fibroids with Roentgen rays. Patients under treatment at present are omitted. The cases are all private patients, and a careful selection of examined cases was made. I am indebted to several colleagues for kindly sending patients, where they thought X-ray treatment would be appropriate.

I shall analyze these twenty-four cases according

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

to age, kind of tumor, size of tumor, symptoms, complications and results.

Three of the women were under forty; but none of these were under thirty years of age; of the remaining twenty-one, two were over fifty years of age; of the whole number four were unmarried; six of the married women were sterile.

Tumors were all interstitial, sub-serous, multiple (with one exception), varying in size from a walnut to a cocoanut.

Three women complained of pressure symptoms; all the others had disorders of menstruation, ranging from extended regular menstruation to severe hemorrhages, reducing the hemoglobin in four patients to below 40 per cent. (Thalquist).

Complications were noticed: one emphysema pulmonum with bad heart; one pyelitis; one subacute nephritis; three excessive adiposities—one amongst these lipomatosis dolorosa; one venectasia.

In twenty-one cases menopause was established, with complete disappearance of palpable fibroids in two, and more or less diminution of the tumor in all the other cases; relief of pressure symptoms in all three cases.

Two women remained away when the hemorrhages ceased. In one of these cases menses had become regular; in the other irregular light bloody discharges still occur.

In one case I had to perform hysterectomy; here the diagnosis had been erroneous; it was not an interstitial, but a sub-mucous fibroid.

From my observation, I have come to divide the cases of women with fibroids of the uterus in three classes as far as Roentgenization is concerned.

First. Roentgenization is imperatively demanded.

Second. Roentgenization is contra-indicated.

Third. Cases of choice between operation, Roentgenization, observation.

Roentgen rays should be applied to all cases that are grave surgical risks, or where any complication exists that produces any risk at all.

Amongst my cases, the patient with emphysema pulmonum and wretched heart would certainly have been a grave risk; likewise the three exsanguinated women with fatty degeneration of their organs.

Cases of nephritis and pyelitis are not exactly operative risks, but they are decidedly better off without operation.

Patients with severe anemia, bad hearts, lung affections, poor kidneys, phlebectasies, should certainly have the benefit of Roentgen ray treatment.

On the other hand, very large tumors are no subjects for raying; rapidly growing tumors must be operated, because they raise a suspicion of malignancy; wherever the slightest suspicion of malignancy exists operation is indicated, followed by ray treatment.

In this class also belong tumors that show any disposition to grow after the menopause.

Pregnant women should not be treated with X-rays, nor women who wish to retain the ability to bear a child.

Sub-mucous, pedunculated sub-serous tumors are not fit subjects for Roentgenization; likewise women with adnexal tumors coexisting.

There remains a very large number of women with uterine fibroids who offer excellent operative chances, but where symptoms are slight, or where symptoms are lacking altogether. I have tried in former years in a number of such cases, by "watchful waiting" to steer these patients safely into menopause; in some cases I succeeded; others, however, drifted in somebody else's hands and were promptly operated upon, a thing that I could easily have done myself.

In this age of extremely active, polypracmatic medical endeavors, one is compelled to do something, and it seems to me that in certain cases of uterine fibroids Roentgen ray treatment is an excellent substitute either for operation or for therapeutic nihilism.

The advantages of Roentgen treatment over operation are manifest; there is absolutely no mortality from rays, which cannot possibly be said of hysterectomy; there is no ventral hernia, no adhesions, no thrombophlebitis after Roentgen treatment —things that I have seen in my own and in others' practice after operation; no hospital, no staying in bed.

The worst that may happen is that we have erred in our diagnosis, that we have to deal not with a fibroid, but with a fibro-sarcoma; or that the fibroid may be of the intractable kind, submucous fibroid. Then an operation would have to be done instead. The possibility of this occurrence requires a most careful diagnosis, and constant, rigid observation.

Aside from the possibility of failure due to incorrect diagnosis, further drawbacks of Roentgenization have to be mentioned: the symptoms are relieved, the tumors shrink, but do not always disappear; some patients prefer complete removal of the growth even if some risk is incurred. Roentgenization, like all conservative treatment, requires time; some patients prefer quick action. When the patient lives far away from the physician, Roentgenization is impractical.

I have endeavored to give an unbiased opinion in this paper on the status of X-ray treatment of uterine fibroids. In summing up I wish to say: Roentgenization of uterine fibroids forms an excellent addition to our armamentarium; it is not a panacea, must not be used indiscriminately; but if judiciously applied, it will in proper cases save life and spare much suffering.

A STUDY OF THE LUNG REFLEXES IN PULMONARY TUBERCULOSIS.*

By F. M. POTTENGER, A. M., M. D., LL. D.,
Monrovia, Cal.

The reflex is the means by which tissues and organs react to their surroundings. A reflex is due to an impulse which is carried over a sensory neuron to its cell in the central nervous system, where it is transmitted either directly or through other nerve cells and their fibers to another cell which through its fibers produces an action. These reflexes may be simple and take place in the same segment of the cord which receives the sensory

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

impulse, the connection being direct from the sensory to the motor neuron; or they may be complex, the acting efferent neuron being separated widely from the afferent sensory cell body, and the two being connected by several different neurons.

The voluntary nervous system has been studied with care in the past; but the involuntary system, which properly is called the "vegetative system," while of great importance to clinical medicine, has not been developed in clinical literature. Every smooth muscle and all secretory glands throughout the body are supplied by the vegetative nervous system. The vegetative nervous system may be divided into the sympathetics and the parasympathetics. Some structures are supplied by both divisions of the vegetative system, one activating and the other inhibiting action. This is shown best throughout the entire enteral system. The enteral system is made up of the gastrointestinal tract and all of those structures embryologically related to it. These are: The respiratory system, the liver, the pancreas, and the bladder, aside from the trigone. Being derived from the intestinal tract, they have the same innervation as the intestinal tract itself. The entire enteral system is activated by the parasympathetic nerves. The parasympathetic nerves consist of all vegetative fibers which run in the third, seventh, ninth, tenth and eleventh cranial, and the pelvic nerve. Wherever a muscular contraction or secretory activity is produced in this entire system, it results from the stimulation of the parasympathetic fibers which supply the structure affected. The sympathetic nervous system also sends fibers to practically all of these structures, which antagonize the parasympathetics; and when stimulated, it produces an inhibition of action. Tonus in these various organs is maintained by the opposing action of the sympathetics and the parasympathetics; and the nearer the stimulation in the two systems equals each other, the more stable is the function of the organ or structure.

The sympathetics and the parasympathetics contain both sensory and motor fibers. While it is questioned by some writers whether or not the sensory fibers from internal viscera are capable of carrying sensations, such as pain, heat, and cold, which are produced by stimuli with which these organs have not come in immediate contact, there is no doubt that they carry afferent impulses to the central nervous system, the same as the spinal sensory nerves, which result in reflex action.

Whenever an internal viscus supplied by both sympathetic and parasympathetic fibers is inflamed, we have two sets of reflexes, one resulting from the sensory afferent impulses carried through the sympathetics, the other resulting from the sensory afferent impulses carried through the parasympathetics. The sensory impulses carried through the sympathetics are transmitted to the spinal nerves and result in reflex action in the tissues which are supplied by these nerves. This reflex shows itself during acute disease in sensory disturbances in the soft tissues, the skin and other soft skeletal tissues and in motor changes in the muscles; and, if the impulse continues for a long time, it results in tropic changes in all skeletal tissues which come under the influence of the nerves affected by the reflex.

The sensory impulses carried through the parasympathetics result in stimulation of other branches of the parasympathetics and the cranial nerves which are in reflex connection with them, and produce reflex action mainly in other internal viscera, but also in the sternocleidomastoideus and trapezius muscles and in tissues supplied by the sensory fibers of the fifth cranial nerve. These reflexes are of four kinds: motor, sensory, secretory and trophic.

This gives us a basis for explaining the so-called "functional disturbances" which are found in other important internal viscera belonging to the enteral system when any organ of this system is inflamed. We can thus see that there are two groups of symptoms, one of which may be called the "sympathetic group," the other the "parasympathetic group." Inasmuch as MacKenzie has named two of the important reflexes of the first group the "viscero-motor" and the "viscero-sensory," it seems best to retain this characterization, and I would suggest that the trophic change be called the "viscero-trophic" reflex. For those changes which result reflexly through the parasympathetics, I would suggest the name "parasympathetic-motor reflex," "parasympathetic-sensory reflex," "parasympathetic-secretory reflex," and "parasympathetic-trophic reflex."

SYMPATHETIC REFLEXES.

With this physiological basis understood, we shall now proceed to analyze those symptoms which result from an inflammation in the lung. The lung, as previously mentioned, belongs to the enteral system and is embryologically derived from the gastrointestinal tract. The motor cells which give origin to the sympathetic fibers supplying the lung are found in the stellate ganglion. The connector fibers which carry the impulses from the spinal cord arise from the upper six thoracic segments, joining the motor cells in the stellate ganglion. The sensory cells of the sympathetic are found in the posterior root ganglion of the upper six thoracic segments. All impulses which result from inflammation of pulmonary tissue are probably carried back to the segments from which the connector fibers arise,—the posterior root ganglia of the upper six thoracic nerves. The reflexes which result from these impulses, however, do not take place in the thoracic spinal nerves, but are transferred upward in the cord to the cervical spinal nerves. As far as we can determine clinically, the third and fourth cervical nerves are the center of the reflex action from the lung, although there is connection with possibly all of the cervical nerves.

Impulses carried through the sensory nerves of the sympathetics from the acutely inflamed lung produce reflex motor and sensory changes in the tissues supplied by the cervical spinal nerves; and if the disease becomes chronic, trophic changes also appear. The viscero-motor reflex which results from the lung shows itself in a contraction of the fibers of those muscles which receive their origin

from this portion of the cord, and particularly from the third and fourth segments. This is recognized clinically as an increased tone or spasm. The muscles which show this best are the sternocleidomastoideus, scaleni, trapezius, levator anguli scapulæ, rhomboidei, and diaphragm, and to a lesser extent the pectoralis.

It is characteristic of the viscero-motor reflex, as well as of the viscero-sensory and viscero-trophic reflexes, that it is confined largely to the side of involvement. It will be readily understood that an increased tonus or spasm in the above accessory muscles of respiration would have a tendency to fix the side involved, resulting in a lessened respiratory movement. The greatest muscle factor in producing the lessened respiratory movement, unless the intercostales are also in spasm as a result of an underlying pleuritis, is the spasm of the diaphragm. This can be understood by recalling that this is the most important muscle of respiration, and that it is the largest factor in enlarging the thoracic cavity.

The increased tonus on the part of these various muscles may sometimes be seen on inspection, and is usually determined more or less readily by palpation. The readiness with which it is determined will depend upon the character of the muscles under conditions of health, and whether trophic changes in the tissue are present as a result of previous inflammation. There is nearly always an asymetry in the muscles of the shoulder girdle on the two sides of the body. This includes not only those above the clavicle and scapula, but the pectoralis and often the rhomboidei. Observation of a great many individuals shows that most people, and particularly those in the professions and those who do ordinary work, including practically all women, have on the side of the hand which is used most muscles which are considerably smaller than those on the other side. At the same time they seem to stretch so that they become longer. The lengthening of the muscles which support the shoulder girdle causes the shoulder to drop and become lower than on the other side; and the dropping of the shoulder, together with the diminished size of the pectorales causes the breast on this side to assume a lower position and the whole tissue mass to appear smaller than on the other side. The dropping of the shoulder carries with it the insertion of the pectoralis which pulls this muscle away from the clavicle and causes a subclavicular cupping. On the contrary, in individuals who use the arms a great deal, such as those who use a pick and shovel, or hammer, the muscles enlarge as a rule and are larger on the side of the hand that is used most.

The viscero-sensory reflex, resulting from the inflammation in the lung, manifests itself through the sensory filaments of the same spinal nerves that show the viscero-motor reflex. It may be recognized as a distinct pain, usually dull and aching in character, or as an alteration in sensations to heat and cold, as pointed out by Head; also in hyperalgesia of the skin and deep, soft tissues. The point of greatest intensity of the sensory changes is also in the area supplied by the third and fourth cervical nerves. These nerves, anteriorly, supply the neck and upper portion of the chest as low as the second rib; and, posteriorly, the neck and upper portion of the chest as low as the spine of the scapula; and also those areas running out over the deltoid muscle. This viscero-sensory reflex is extremely common in tuberculosis, both in the acute and chonic forms.

The viscero-trophic reflex from the lung likewise manifests itself in the same areas as the viscero-motor and viscero-sensory reflexes. The nutrition of tissue depends upon both motor and sensory nerves. The nutrition of the skin and subcutaneous tissue depends upon the sensory nerves, while both the sensory and motor enter into the control of the muscles. We find the viscero-trophic pulmonary reflex showing itself in the third and fourth cervical segments. It is most marked in the skin and subcutaneous tissue of the neck and those portions of the chest above the second rib anteriorly and the spine of the scapula posteriorly. It also affects all muscles which are influenced by the viscero-motor reflex as detailed above. While innervation follows the body segmentation for the most part, yet it is not exact, and extension beyond the usual limits of a given nerve are not infrequently found. Roughly speaking, however, it may be said that a viscero-trophic reflex affecting the skin and subcutaneous tissue above the second rib anteriorly and spine of the scapula posteriorly, and extending up into the neck, is of pulmonary origin; while one extending from these levels to the lower costal margin is of pleural origin.

It can be seen that the viscero-motor, viscero-sensory, and viscero-trophic impulses may be utilized to great advantage in the diagnosis of diseases of the lung, because the changes are evident on inspection and palpation. They have a further very important bearing upon the data obtained by the usual methods of examination,—percussion and auscultation,—because the results of percussion and auscultation are greatly modified by the amount of, and the condition of, these soft structures through which the blow and sound must pass. This can readily be appreciated by clinical examination. In some instances, on the side of the involvement, as much as half of the soft tissue over the apex of the lung will be wasted through the degeneration which has resulted from the viscero-trophic reflex, and it can be seen readily that the sound through the degenerated structures will be very different from that of the normal or less degenerated structures on the other side. At times the viscero-motor reflex causes such a tension in the musculature that it raises the pitch of the percussion note and greatly increases the resistance to the finger. These conditions also greatly modify the respiratory murmur as elicited on auscultation.

PARASYMPATHETIC REFLEXES.

As parasympathetic reflexes we describe all reflexes in other organs which result from afferent sensory impulses which travel centralward from the lung and express themselves peripherally in other organs supplied by the vegetative nervous system. We must also include reflexes in pulmonary tissue which result from afferent sensory

impulses coming from other viscera and expressing themselves through the vagus fibers in the lung.

Parasympathetic Reflexes Expressed in Other Viscera, which Result from Stimulation in the Lung. Parasympathetic reflexes, the existence of which depends upon stimuli arising from the lung, are apparently expressed most frequently in other structures which are supplied by the vagus nerve, such as the larynx, stomach, upper portion of the intestines, and the heart. There are many different reflexes, however, of pulmonary origin which are expressed through other fibers of the vegetative system. We find, upon careful observation, that parasympathetic reflexes are expressed through the vegetative fibers in the third, seventh, ninth, tenth and eleventh cranial nerves, and the pelvic nerve. In some of these the connection is very plain and the clinical relationship is unmistakable. In others it is vague and probably more difficult to establish with the data which we now have at hand.

Vagus. The inflammatory conditions in the lung probably produce motor and secretory disturbances in all structures supplied with motor and secretory power by the vagus nerve, in some of which the effect is very evident.

In the larynx we have motor, sensory, and secretory reflexes shown through the superior laryngeal nerve. The parasympathetic sensory reflex shows in altered sensation in patients suffering from pulmonary disease, manifesting itself in irritation and the impulse which is followed by coughing. There is also a parasympathetic motor reflex shown through this nerve, which manifests itself in a condition in which the cords are relaxed and baggy in the center instead of approaching each other as they should. This comes from an interference with the innervation of the cricothyroid muscle. The inferior laryngeal nerve supplies the remaining muscles of the larynx and many disturbances in muscular action which manifest themselves in an abnormal approach of the cords are found as a result of the pulmonary reflex. These two reflexes produce various degrees of hoarseness and at times aphonia, which are so common in tuberculosis, beginning as soon as the pulmonary tissue is irritated and lasting through until the disease ends. The glands of the pharynx and larynx also receive innervation from the laryngeal nerves and an increased secretion is frequently met as a reflex phenomenon.

On the part of the gastrointestinal tract, motor and secretory disturbances are extremely common as a result of the reflex which arises from the inflamed lung.

Hypersecretion on the part of the stomach and intestines is frequently present as a result of the reflex action from the pulmonary vagus. This on the part of the stomach shows as a hyperchlorhydria,—a common symptom in all stages of tuberculosis. This manifests itself at times even during marked toxemia with high fever. Under these conditions the central stimulation of the sympathetic nerves which results from the toxins is not sufficient to inhibit the action of the vagus which has its tonus increased by the reflex vagus stimulation. So it is not uncommon to find patients during the stage of cavity formation show a clean tongue and an increase in the acidity of the stomach.

The motor reflex manifests itself in increased tonus of the muscles, resulting in hypermotility.

Reflex nausea and vomiting are frequent in certain stages of pulmonary tuberculosis. They manifest themselves most commonly when the pulmonary inflammation is the most marked. Increased muscular tonus is shown in the stomach, but particularly does it produce symptoms as it affects the intestinal tract. The increased tonus as it affects the circular muscles of the bowel results in constriction, interfering with the onward passage of the ingesta and resulting in two conditions,—spastic constipation and stasis. If the increased muscle tonus affects the longitudinal fibers rather than the circular, then the ingesta is hastened on and a looseness of the bowels or diarrhea results.

In the intestinal tract we infer that there is also a reflexly increased secretory activity, from the fact that the stools very often show an increased water content.

Spastic constipation is frequently found in pulmonary tuberculosis. Reflex stimulation of the circular muscle causes contracture which interferes with the onward movement of the ingesta and interferes with the normal daily stool. The spasticity present may vary greatly in degree. It may be only a slight interference, or it may be so severe as to cause great difficulty in the emptying of the bowel.

Intestinal stasis resulting from reflex stimulation of the circular coat of the bowel is commonly found when the pulmonary tissue is involved. It is closely related to spastic constipation in its etiology. Owing to the fact that the ingesta is delayed in its passage through the bowel, an opportunity for increased bacterial action is offered, decomposition takes place with the liberation of toxins and gas. This results in either a more or less marked toxemia, headache, malaise, even severe general aching at times follows. The condition may relieve itself if the stimulation of the sympathetics which results from the the toxemia is sufficient to inhibit the action of the vagus and relax the muscular tonus. A cathartic, however, is usually given, moving the ingesta onward and relieving the symptoms for the time being.

On the part of the heart we have in pulmonary tuberculosis a very marked disturbance in innervation. To understand the heart action, one must recall that the heart responds to many different conditions, both physical and psychical. Whenever more blood is needed in any part of the body, the heart must change the character of its beat, either as to rate or as to strength, or both. Under normal conditions in pulmonary tuberculosis, there is a deficient inspiratory act, which, if sufficiently decreased to reduce the normal amount of blood which should be delivered to the right heart at its normal rate of contraction, would of necessity call upon the heart for an increased rate of contraction or an increased output at each contraction. Deficient oxygenation when present increases the heart beat also. If toxemia is present, this of itself will

also increase the rate of contracture by stimulating the sympathetic nerves centrally. On the other hand, the inflammation in the lungs stimulates the vagus and reflexly has a tendency to slow the heart. So the heart is more or less continuously influenced by both sympathetic and vagus impulses.

When pulmonary tuberculosis is present, if the patient is called upon to exert himself, the heart will increase its rate of contraction more than it would under normal conditions. Particularly is this true when toxemia is present. When toxemia is not present, the stimulation of the vagus nerve is often sufficient to prevent the heart from changing the rate of contracture which otherwise would obtain, and the pulse rate appears as a relative bradycardia.

Oculomotor Nerve. It is possible that a parasympathetic motor reflex also takes place through the vegetative fibers of the third cranial nerve. There is an unbalanced pupil in a great many of our tuberculous patients. This often shows itself as a dilatation. Occasionally we see it as a narrowing of the pupil, and the fact that we do not have a dilatation more commonly is probably partly due to the reflexly increased tension of the parasympathetic fibers supplying the pupillary muscle. These patients often suffer from disturbance in accommodation. A reflex disturbance in the ciliary muscle must be produced by reflex parasympathetic stimulation.

Facialis. The vegetative fibers of the seventh nerve supply the mucous membrane of the nasal cavities and the soft palate. An increased secretion of the nasal mucous membrane is sometimes complained of, and might be due easily to the parasympathetic reflex. The salivary glands are supplied by the chords tympani from the seventh cranial (nerve facialis) and Jacobson's nerve from the ninth (glossopharyngeal). It is not at all uncommon to have increased salivary secretion in our patients with pulmonary tuberculosis, and this is often particularly marked when the larynx is involved.

Hectic flush, which is one of the well-recognized symptoms of pulmonary tuberculosis, is a parasympathetic-motor reflex, the afferent fibers passing through the sensory fibers of the pulmonary branches of the vagus, the efferent passing through the vegetative fibers of the seventh cranial nerve, which supply the mucous membrane of the cheek and face and cause vasodilatation in these structures.

Another reflex which I have previously described is a trophic reflex on the part of the tongue. It will be noticed that patients who have a chronic extensive one-sided pulmonary tuberculosis often show a devitation of the tongue from the median line when protruded, the tongue pushing over to the side of greater involvement. This is a reflex in which the efferent impulse is carried either through the glossopharyngeal hypoglossal, or through the lingual branch of the facialis nerve.

As parasympathetic-motor reflexes through the eleventh nerve (accessorius), we must consider those which are shown through the muscular branches which go to the sternocleidomastoideus and the trapezius. We must also bear in mind the part that this nerve has in the motor innervation of the larynx and œsophagus.

Pelvic Nerve. As far as the pelvic nerve is concerned, I am not able to determine many distinctly clinical symptoms which result reflexly from inflammation of the pulmonary tissue, although it is possible that there might be a definite influence upon those portions of the generative organs, the bladder and the rectum, which are supplied by the vagus nerve. The relaxation of the vesical sphincter, which is complained of considerably by many patients, might have back of it the influence produced by reflex stimulation through the vagus and pelvic nerves. Such patients complain of the escape of urine at the time of coughing.

Parasympathetic Reflex Expressed in the Lung, the Impulse Arising in Other Viscera. The only two parasympathetic reflexes which can arise in the lung as a result of impulses coming from inflammations in other viscera, are increased bronchial tonus or spasm and increased bronchial secretion.

We may thus have an asthma or a bronchitis arising from stimuli in other organs. It has long been thought that asthma is often of reflex origin and the seat of the stimulus has been variously placed. Eye strain, nasal irritation, polypi, septal spurs and deflections, hay fever, sinus infection, stomach and intestinal irritation, heart affections, and affections of the genitourinary tract, have all been suggested as causes; and all have the physiological reflex connection through the parasympathetics to cause it. No doubt some of the cases of bronchitis are also of reflex origin.

It will thus be seen from this study of the lung, which is only an example, that no organ is an entity; but that it is bound in close relationship with other internal organs. This relationship is particularly strong throughout the enteral system, and the so-called "functional disturbances" on the part of organs of this system become a real genuine part of disease processes.

While this study is confined to the lung, it will be plain to any student of visceral neurology that the same principles apply to all organs of the body; and that these reflexes are particularly strong in the large internal viscera,—the stomach, the intestines, the liver, the pancreas, the kidney, the generative organs, the heart, the blood vessels,—and that all are bound reflexly to each other and that one cannot be seriously inflamed without sending afferent impulses centralward, which result in disturbance of function in other organs bound to them by the vegetative nerves.

Special Department

NO COVENANTED PEACE WITH GERMANY.

America, unless we repudiate civilization and abandon humanity and put a premium on savagery and brutality, can make no covenanted peace, no peace by agreement or negotiation with Germany. It would be a covenant with hell, a partnership with infamy.

Nor would such a peace secure peace, except so long as it suited Germany. We can judge the future only by the past, and to Germany sacred

treaties are scraps of paper only. Germany's whole history is a record of national treachery, national bad faith, national dishonor, national murder, and national infamy.

Article 56 of The Hague convention, to which Germany solemnly subscribed, is: "Family honor and rights, the lives of persons and private property, as well as religious convictions and practice, must be respected. Private property can not be confiscated."

The world knows how Germany has observed this article. There are millions of individual witnesses to her flagrant breaches of it. Every acre of foreign soil Germany has occupied bears mute, but unimpeachable evidence of it. There is plenty of German evidence of it, too.

"The goods of different sorts seized in the enemies' territories are in such large quantities that the difficulty of knowing where to put them increases day by day. At the request of the Prussian minister of war, all chambers of commerce have been asked to give all possible information with regard to storehouses, sheds, etc., which could be used temporarily to warehouse the spoil." (From the Frankfurter Zeitung, January, 1918.)

The German papers have been crowded with advertisements of sale of property taken from France and Belgium. Members of the Reichstag have boasted of, others have censured, the amount of booty brought to Germany from the occupied territory, and the destruction has been far greater than the confiscation.

Of the old men and children murdered, of the women and girls ravished, of the noncombatants taken from their homes and deported to work for their conquerors, of the merchant ships sunk and passengers and crews murdered, of the hospital ships sunk, the hospitals and unfortified cities bombed, of the mutilation and number by crucifixion and otherwise of wounded and captured soldiers—of all this beastliness there is plenty of evidence, evidence that no one can disbelieve.

The best answer to German peace propaganda is sinking more U-boats, sending more men to France, and speeding up our work along every line.

AN UNPRECEDENTED OPPORTUNITY FOR WOMEN.

By EMMA WHEAT GILLMORE, M. D., Chairman, Committee of Women Physicians, General Medical Board, Council of National Defense.

The same year that gold was discovered in California, a lone pioneer received the first medical diploma which the United States had issued to a woman. Other colleges shortly followed the example of the one which had opened its doors to Elizabeth Blackwell, and to-day over fifty co-educational medical schools admit women upon the same terms as men.

There are more than 25,000 American physicians in military service at this writing, and the Council of National Defense is undertaking, through the Volunteer Medical Service corps—an organization which has President Wilson's approval—the task of classifying the qualifications of 90,000 more. Of these, about 6,000 are women, less than one-third of whom have registered with the General Medical board.

Women of the profession, unless our qualifications are standardized and on file, can you not see that we are an unknown quality and quantity as far as the government is concerned? In spite of the overwhelming difference in number—6,000 women and over 100,000 men—and regardless of the fact that over twenty-two centuries have passed since Hippocrates wrote the immortal Oath, and only sixty-nine years have elapsed since women entered the medical profession, the Volunteer Medical Service corps has invited them to membership with the same impartial cordiality as it has the men.

During the last week in August application blanks for the Volunteer Medical Service Corps were mailed in franked envelopes to all legally qualified men and women in the United States who were not already in government service. Presumably a number of women have been overlooked because many of them are not members of medical societies, but this will speedily be corrected if a notification of the omission is sent to the Volunteer Medical Service Corps, Council of National Defense, Washington, D. C.

Meanwhile, medical women who possess a vision will see in the Volunteer Medical Service Corps an incomparable method of organization which will register their qualifications and place them in an identical coded class system with men physicians. This corps is in reality an ideal procedure for mobilizing the military forces of our country for selective medical war service. Incidentally, it will place loyal and patriotic medical women by the side of those men who are willing to give themselves. Even though all of them are not elected to membership, their names will be on file with the government as willing to serve as far as their strength and capability will permit, and no one can point a finger at them and say "slacker."

Will a page be turned over in the history of American medical women upon which will be written the qualifications of 6,000 of them, matching that group of English physicians known as the Scottish Women's Hospitals, which was so perfectly organized that they were able to hand over to their government a constructively organized body of professional women for military service? Or shall we continue, as we have done in sporadic groups for the past sixty-nine years, to demand recognition of men and at the same time neglect to unanimously affiliate with them in recognized medical societies, and to withhold our influence both with pen and vote when medico-social and medico-political and medico-scientific issues are at stake which shake the very foundation upon which medicine rests?

The body politic of the civilized world holds a prominent place for the profession of medicine in the near future. Are we to have a hand in shaping it? The Volunteer Medical Service Corps is big with promise for women of the medical profession if we take advantage of it to put ourselves on record. The response which the Council of National Defense receives from women who apply for membership will tell the tale as to whether they have or have not grasped and taken advantage of the unprecedented opportunity which this world's war for Democracy has opened up for them through the medium of the Volunteer Medical Service Corps.

Book Reviews

Hodgen Wire Cradle Extension Suspension Splint. By Frank G. Nifong; 124 illustrations; 162 pages. St. Louis: Mosby Co. 1918.

This book describes various splints and their application to fractures of the shaft of the femur, and especially the Hodgen wire cradle extension suspension splint. It has a short chapter on extension splints for fractures of the shaft of the humerus. The author recommends the Hodgen apparatus enthusiastically but does not mention pressure sores over the head of the fibula, which many surgeons may find it difficult to avoid. The book contains many good illustrations and diagrams and will be of interest to those undertaking the treatment of these fractures. L. E.

Medical Service at the Front. By Lieut.-Col. John McCombe, C. A. M. C., and Capt. A. F. Menzies, M. C., C. A. M. C. Illustrated; 128 pages Philadelphia and New York: Lee & Febiger, 1918. Price, $1.25.

This booklet presents in compact form the organization of the medical service of the Canadian Army Medical Corps and its arrangements for the care of sick and wounded at the front—i. e., from the front

line to the casualty clearing station (a hospital corresponding to our evacuation hospital). It contains numerous explanatory diagrams and plans. The Canadian Army Medical Corps is modeled on the British organization, so that the manual will serve for both. L. E.

Lessons From the Enemy. How Germany cares for her war disabled. By John R. McDill, Major R. M. C., U. S. A. Medical war manual No. 5. Authorized by Secretary of War Philadelphia and New York. Lee & Febiger. 1918. Price $1.50.

Major McDill, as director of an independent hospital unit sent from America, went to Germany in 1916. This book gives the results of his experiences. He was evidently a keep observer, and writes thoroughly of what came under his eye in his own hospital, and also of the general arrangements made by the Germans for the care and transportation of their wounded, and for the care of their crippled. He was aided in his investigations by the German authorities. The result is an excellent manual that should be of great value in the work that is ahead of us. L. W. E.

Surgical Applied Anatomy. By Sir Frederick Treves. 7th edition. Revised by Arthur Keith and W. Colin Mackenzie. 674 pages of text. Illustrated. Philadelphia: Lea & Febiger. 1918. Price $3.

It is seldom that we are called upon to pass on a work that is so meritorious and favorably known as Treves' Surgical Applied Anatomy. We cannot pause to search out minor typographical errors when once absorbed in the wealth of useful and important facts so practically placed before the reader in the new seventh edition. Every surgeon, physician and student in medicine should have a copy of this work in his or her pocket, and should peruse and recall every fact until it is at the memory's beck and call. We regret only that it has been necessary to increase the price and in this way to cause a demand for copies of the older editions. We must candidly admit, however, that this little "big" book is indeed worth the $3.

F. E. B.

A Textbook of Obstetrics. By Barton Cooke Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania. Eighth Edition, Revised and Reset. Octavo of 863 pages, with 715 illustrations, 38 of them in colors. Philadelphia and London. W. B. Saunders Company. 1918. Cloth. $5.00 net.

The eighth edition of this well-known textbook is very similar to previous editions. It is so well known that comments upon its attractiveness for students or its shortcomings for general practitioners are hardly necessary. The reviewer has read with interest every page of the present edition. The entire subject of obstetrics is crowded into 830 pages with as little padding as is found in the average American textbook of obstetrics. One misses the exact statistical data that Hirst could give from his vast experience. The book will meet the needs of many undergraduates, but it is too vague and indefinite to satisfy men in active practice. The illustrations are mainly from photographs which add to the attractiveness of the volume. A. B. S.

Infant Feeding. By Clifford G. Grulee, A. M., M. D., Assistant Professor of Pediatrics at Rush Medical College; Attending Pediatrician to Presbyterian Hospital, Chicago. Third Edition Thoroughly Revised. Octavo of 326 pages, illustrated. Philadelphia and London. W. B. Saunders Company. 1917. Cloth $3.25 net.

The third edition of Grulee's student's manual on infant feeding has come from the printer, and in every way it carries out the high standards of previous editions. It can be recommended without reservation to students, nurses and physicians. It is thoroughly sound, and is written in such a manner that even the most technical pages become interesting. The inclusion of Von Pirquet's illuminating charts, which give graphic demonstrations of physiological tolerance and pathological intolerance for food, is of great value. The only adverse criticism would rest on the objection to the author's complete acceptance of Finkelstein's teaching with regard to the nutritional disturbances of nurslings. We have progressed in our understanding of these disorders beyond the point at which the Berlin clinician left us and, whatever we may owe to him, much of his teaching is open to more criticism than one finds it subject to in Grulee's manual. However, such is but a minor objection and no physician or nurse who purchases the book for daily use but will glean much information and valuable aid from its pages. L. P.

The Treatment of War Wounds. By W. W. Keen, M. D., L. L. D., Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia. Second Edition, Reset; 12 mo., 276 pages; illustrated. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, $2.00 net.

It is remarkable how much a man like Keen can compress into one small volume. The Nestor of American surgery has given us a compendium which should stand through many editions as a monument to his talents as a teacher, to his experience, oversight and humanity. He says in the first paragraph that the book is incomplete. It omits chapters on dental and plastic surgery, orthopedics and rehabilitation of the wounded,—but that which it does give is so excellent an exposition of the most important surgical achievements of the present war, that one who studies it well will have at his command almost everything of moment,—facts that could otherwise be gathered only by laborious reading and experience. It contains 204 pages of text, 178 of them are devoted to general surgery, shock, transportation of wounded, fractures, the various new antiseptic methods, X-ray localization, and the various malignant infections. The remaining chapters treat of wounds of the body cavities, burns, and include as addenda a number of personal letters from prominent surgeons. Scattered through its pages are many formulae, practical hints and technical directions. These alone would make it a welcome companion to the surgeon on active duty. A man who includes this book in his luggage may leave many others behind. It should stand as a classic. Certainly it is the ranking English monograph on the surgery of the present war. May Keen be with us to see the book through many editions! L. E.

Interpretation of Dental and Maxillary Roentgenograms. By Robt. H. Ivy, M. D., D. D. S. St. Louis. C. V. Mosby Co. 1918.

This little volume is valuable on account of the emphasis it gives (1) to the fact that the roentgen ray is valuable in diagnosis only in the hands of those few who have the knowledge and the experience sufficient to enable them to distinguish the normal from the abnormal; (2) to the fact that rarefied areas shown in post-operative roentgenograms are in most cases active foci of disease; (3) to the lack of co-ordination "of the clinical, roentgenologic, and other parts of the examination" for dental pathology; (4) to the fact that both plates and films should be used in cases of roentgenologic examination that give rise to doubts. The book discusses matters quite out of date; for instance, "good" root fillings and the treatment of dead teeth. The author's ideas about the classification and handling of dead teeth are now quite

obsolete. For some years dentists on the Pacific Coast have realized that dead teeth cannot be rendered permanently aseptic. In view of present knowledge it is truly startling to find that Ivy advocates the toleration of streptococcal infection until such time as systemic states, in some cases probably incurable, have reached a diagnosable stage. Of the 144 pages only 47 are devoted to reading matter. The rest of the book is given up to illustrations of roentgenographic prints. Many of these illustrations aiming to instruct one unfamiliar with the work how to interpret roentgenograms, are inadequate for this purpose, and they are of little value to one who has already learned how to interpret roentgenograms. Moreover, some of the prints are misleading since they picture case after case pronounced "normal" which indicate the need of radical operation because of pathology clearly indicated in the prints. On the whole, then, the book, in spite of the emphasis given to some good points, is at least five years behind the times.

J. N.

Diseases of the Male Urethra. By Irvin S. Koll, M. D., Professor of Genito-Urinary Diseases, Post-Graduate Medical School and Hospital, Chicago. Octavo of 151 pages, with 123 illustrations, several in colors. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, $3.00 net.

This monograph of fourteen chapters gives the personal experience of the author, and as such is concise and brief. Many of the facts expressed are probably not shared by the majority of his colleagues. Anatomical descriptions are disappointing and often confusing, as, for instance, in the first chapter, the urethra is divided into a pelvic, perineal, scrotal and penile portion, but in chapter VIII in connection with stricture of the anterior urethra a navicular, penile and bulbous portion is considered. Warden's views concerning the transmutation of the gonococcus are quoted at length in chapter III, but in the next chapter the author contradicts himself by saying that a gram-negative intercellular diplococcus always means gonorrhea. In a very brief chapter on diagnosis the many useful glass tests receive no mention whatever, the two glass test being listed as the only one of any value and then dismissed "as neither necessary nor essential as it is not a difficult matter to differentiate between anterior and posterior urethritis symptomatically or subjectively without it." The author uses albargin ointment in the treatment of acute gonorrhea and states that he can abort in five to ten days all acute cases seen within twenty-four hours of the onset of a discharge. In the treatment of chronic prostatitis the author depends mostly upon massage two to three times weekly which he states should be "continued as long as any pus or detritus is expressed from the gland," which he determines "solely by the appearance of the urine voided after massage." Seminal vesiculitis in the author's opinion always accompanies prostatic infection, but no outline whatever for the treatment of the condition is given. In the chapter on stricture fibrolysin is recommended "one ampule injected intravenously on three successive days." In cases of acute urinary retention the much abused suprapubic trocar is advocated. The monograph is of considerable interest and value to specialists, as an expression of the author's personal experience, but so many of the views are reactionary with no mention of other better recognized methods that it cannot be recommended to the student.

F. H.

Typhoid Fever Considered as a Problem of Scientific Medicine. By Frederick P. Gay. Cloth; price, $2.50 net. New York: Macmillan. 1918.

In this book the author has succeeded in summarizing critically our present knowledge of typhoid fever. The treatise represents a well-balanced compilation of the accumulated laboratory and clinical facts on enteric fevers. Many of the statements are enhanced by the author's personal research, particularly the chapters on artificial immunization and the protective value of vaccination against typhoid fever. Important statistical data are presented for the first time in a comparative form and illustrate conclusively the progress scientific medicine has made in the control of typhoid fever. Most of the other chapters may be classed as valuable reviews of the more modern views and problems of this disease. To the specialist in public health, laboratory diagnosis or experimental pathology, however, the chapters on the modes of infection, diagnosis, the carrier condition, and the treatment of typhoid fever are somewhat disappointing. Unverified statements published in the literature and conclusions drawn from a limited number of experimental observations are used to support some of the author's conceptions of the pathogenesis and immunity of enteric infections. There are also some important omissions, for example, the recognized value of brilliant green in the isolation of enteric fever organisms from the stool is barely mentioned, and the use of glycerine as a preservative for typhoid stools (Teague and Clurman, Benians) have been overlooked. Unfortunately the chapter on carriers does not include Chesley's interesting statistical material (Jour. Am. Med. Assn., 1917, 68), which is the first comprehensive review of the carrier situation in America, and which in itself could have enhanced the chapter on suggested methods of advance in solving the typhoid problem. And again, just as several workers (see Zinsser, "Infection and Resistance," 2nd Edition, 1918, p. 310) were unable to confirm the observations on specific hyperleucocytosis, which Professor Gay still considers the most important function producing the striking results sometimes noted in intravenous vaccine therapy of typhoid fever, those studying the experimental typhoid carriers state in animals, will be obliged to disagree with the author of the treatise relative to many of his statements and conclusions. These few impressions which the reviewer gained by reading the book very carefully do not, however, reduce the general value of the publication, which unfortunately has no index. The bibliography is fairly complete, there are unintentional and intentional omissions. Some references are incomplete, others are not quoted according to a uniform plan and the names of some authors are misspelled.

K. F. M.

Blood Transfusion, Hemorrhage and the Anemias. By B. M. Bernheim. Cloth. 259 pages. Philadelphia: Lippincott. 1918.

Bernheim says in his preface, "It has been my purpose to adhere to the practical side of the subject, both as regards discussions of indications and selection of transfusion methods. Theoretical considerations have been eliminated as far as possible and the future uses to which blood transfusion may be put have hardly been suggested, since the book is meant for the man who is engaged in clinical work of this nature, and desires to know concretely what is being done and how to do it." The bibliographies at the ends of the chapters will guide those who wish to go into the subject farther. The book is entertainingly written and is the outcome of lengthy experience and assiduous study. It fulfills, in the main, the purpose for which it is intended. However, some of its statements are open to criticism. To say that "the death-knell of direct transfusion has been sounded" (page 89) is putting it too strongly. The indirect citrate method has many advantages, but certainly a technic which provokes a chill and a severe reaction in about 25% of all recipients and causes unknown and uncontrollable changes in the blood is open to improvement. It may be doubted whether this method will not ultimately be abandoned. The elaborate description of Crile's and Elsberg's methods, which are of purely historical interest, might

be dispensed with. Of other direct methods Bernheim describes his own, a good one, but omits Pope's tube and its modifications which are just as simple. Among the dangers of transfusion, anaphylaxis receives but scanty mention. I think it more frequent than Bernheim's figures would indicate. It is a question whether all danger may be avoided by proper laboratory tests and whether toxicity and other ill effects of the introduction of extraneous blood always run parallel to its hemolytic and agglutinative properties. An exhaustive discussion of a treatise on a subject still so much in flux and in the making, and still so unexplored as is transfusion, would exceed the limits of a review. However, we agree with Bernheim that transfusion is destined to see an extensive development, that tranfusions are done on the whole rather too seldom than too often, and that their risks rarely outweigh their possible benefits.

L. E.

County Societies

ALAMEDA COUNTY.

Dr. Kirby Smith, Health Officer of the City of Oakland for the past three years, has entered the Service, as have Drs. W. S. Kuder, G. T. Pomeroy, H. L. Parish and Ellsworth Bailey.

Dr. Bailey, who held the position of Roentgenologist at Fabiola Hospital, has been succeeded by Dr. May Dutton.

Fabiola Hospital is equipping an up-to-date laboratory. Dr. Margaret Baldwin will be in charge.

Dr. Theodore Olmsted, for a number of years superintendent of the University Club of San Francisco, has been elected his successor.

The regular meeting of the Alameda County Medical Association held September 16th was devoted to Venereal Disease Control.

LOS ANGELES COUNTY.

PERSONALS.

Dr. Lacey in War Work.

Leave of absence during the war was granted Dr. J. Mark Lacey, medical director of the County Hospital, who has been called to service. He will probably leave for France in October.

Dr. W. E. Mulvihill, formerly chief resident physician at the County Hospital, now is in Camp Cody.

Dr. Hanson Joins Colors.

Dr. Charles O. Hanson of Pasadena left before September 7 for Fort Winfield Scott, San Francisco, to begin his duties as captain in the Medical Corps of the Army.

Pasadena Doctor's Thrilling Service.

Dr. Raymond B. Mixsell returned September 12 from six months' service in France. He narrowly escaped being blown up by bombs on two occasions and was forced to evacuate his Red Cross civilian hospital under fire of hundreds of German guns.

Dr. Charles B. Dirks is Captain.

Dr. Dirks, Eagle Rock, chief deputy county health officer, was commissioned captain in the Medical Corps, U. S. A., September 23. He was ordered to report at Camp Kearny, Linda Vista, within ten days.

A Doctor's Wife Red Cross Home Nurse.

Mrs. Geoffrey J. Fleming, wife of an Ontario physician, was appointed September 29 official home defense nurse for the Ontario Red Cross chapter, by Lillian White, director of nursing for the Pacific Red Cross division with headquarters in San Francisco. Mrs. Fleming is a graduate of the Illinois Training School for Nurses, Chicago.

Dr. H. A. Huntoon Commissioned Captain.

Dr. Huntoon has been called to service in the Medical Reserve Corps, to report for duty on the 17th instant at the Base Hospital at Camp Fremont, Palo Alto.

Beach Doctor Joins Army.

Dr. Robert B. Sweet is leaving for San Francisco, where he will report for duty as a lieutenant in the medical service of the Navy.

A Monthly Bulletin of the Los Angeles City Health Department. F. T. Woodman, Mayor. Published Under Direction of L. M. Powers, M. D., Health Commissioner. Edited by Arthur J. Messier.

Judging by the July number of the Bulletin, Vol. 5, No. 8, Dr. Powers, the Health Commissioner of Los Angeles, and his collaborator, Arthur J. Messier, deserve from the medical profession appreciative recognition for their careful scientific presentation of all the many subjects appertaining to the welfare of the community. Valuable information can be gleaned under the following heads: The Latest Milk Contest, Certified Class, Guaranteed Class, Grade "A" Pasteurized, Grade "A" Raw, Goat Milk; Vital Statistics, Bacteriological Examinations, Houses Quarantined, Fumigation, Chemical Examinations, Milk Inspection, Meal and Bakery Inspection, Fruit and Vegetable Inspection, Sanitary Inspection, Housing Inspection, District Physicians, Obstetrical Physicians, Tuberculosis Physicians, Genito-Urinary Clinics, Los Felis Hospital for Women, Venereal Work for Men at City Jails, Vaccination, etc. Nursing Division.

Summary of Reports for July on all above topics ending with an article on War and Babies. Every practitioner would be benefited by reading these excellent bulletins. Let us congratulate ourselves for having such an excellent and efficient health officer in Dr. Powers.

Social Health Insurance.

There was a special meeting of the Los Angeles County Branch of the California League for the Conservation of the Public Health September 7, 1918, at 8 p. m., in Hamburger's Cafe Room.

Dr. Fitch C. E. Mattison presided. Dr. Harry Vorhees acted as secretary. The object of the meeting was to discuss "Social Health Insurance" which will probably practically emasculate the medical, dental and pharmaceutical professions, and pauperize or bankrupt the members if adopted.

Speakers were Dr. H. A. L. Ryfkogel, San Francisco; Dr. Dudley Smith, Oakland; Dr. James Franklin Smith, San Francisco, and others.

San Dimas Needs No Doctors.

Dr. C. P. Shaffer, the only doctor in San Dimas, a city of 1200, left September 12 to make his home in Long Beach. San Dimas is too healthy and has had no serious epidemic for many years.

Medical Commissions for British Subjects.

Graduates of British or Canadian colleges may obtain commissions in the Medical Corps of either Army, according to Lieut. James Simpson, in charge of the British recruiting office in Los Angeles.

American Women's Hospitals.

September 19, Los Angeles was urged to hurry and fill her quota of $50,000 to send her hospital unit to France by Dr. Martha Welpton, national secretary-treasurer, in a message to Dr. Louis Richter of the local branch. A New York woman gave $100,000 to the hospital organization when she heard of the vital work that women doctors and surgeons are doing at the front. The head-

quarters of the organization are in the Citizens' National Bank building.

Los Angeles Graduate Nurses.

Every graduate nurse of the county can enlist immediately for military nursing service with the bureau of nursing of the Los Angeles chapter of the American Red Cross, according to Miss Margaret McClure, acting director.

37,000 Tons Hospital Supplies Transported Sept. 25.

These supplies included beds, bedding, and everything needed to equip a modern hospital and were safely transported from the United States to Edinburgh, Scotland, according to a letter received today by Rev. C. V. Cowan of Pasadena from his son, Dr. Rea Cowan of Los Angeles.

Dr. Cowan is first lieutenant with a naval base hospital in Scotland.

ORANGE COUNTY.

August.

The August meeting of the Orange County Medical Society was held at Santa Ana. A large number of the members were present. The paper of the evening entitled "Ileocolitis Epidemica" was read by Dr. J. I. Clark of Santa Ana. The doctor reported nine cases, some of which had been so severe as to prove fatal. The presence of the Shiga bacillus was demonstrated. The paper proved to be one of great interest and provoked a very wide and profitable discussion.

Capt. J. M. Burlew has returned from an Eastern cantonment and will resume his practice in Santa Ana.

September.

Since Dr. H. S. Gordon of Santa Ana has been in practice forty years and having spent twenty of those years in Orange County, Mrs. Gordon invited the Orange County Medical Society to meet at their home. The regular September meeting was therefore a social as well as a scientific success. The commodious home of Dr. Gordon was arranged to accommodate the society at a delicious banquet. Dr. Gordon's sons assisted in the entertainment of the guests. The paper of the evening entitled "Ileus" was given by Dr. J. L. Beebe of Anaheim and enjoyed by all present. The after-dinner speeches were, of course, reminiscences of early days and referred in the main to experiences with and about Dr. Gordon. Most notable of all were the remarks of Mrs. Gordon, who besides extending to all present a most cordial welcome to their home referred most fitly to the work of the physician's wife, and her part in the life of the busy doctor. At the conclusion of the meeting Dr. Gordon was presented with a volume entitled "Our National Parks," on the front page of which every member present signed his name and year of graduation in the order of occurrence. Dr. Gordon made a most fitting reply. The meeting at the Gordon home will stand out in the memories of all present as having been one of the most delightful events in the life of the Orange County Medical Society.

October.

The Orange County Medical Society met at the County Hospital on the evening of October 1 as the guests of Dr. and Mrs. H. A. Zaiser, a large number of the members being present. The paper of the evening was by Dr. Dickey of Los Angeles Bureau of Social Hygiene and related to the subject of the control of venereal diseases. The doctor brought out many interesting facts, and above all showed how the preventive methods used at Camp Kearny had reduced the number of infections to a minimum. He also urged upon the members of the Society the value of registering all venereal patients by number so that they could be followed up and not become a greater peril because of lack of treatment and supervision. Dr. A. H. Zeiler of Los Angeles discussed the paper at length, adding many very useful hints regarding treatment and especially the use and value of Salvarsan. Many members joined in the discussion.

Dr. J. A. Jackson of Anaheim reported a case of pernicious anemia which he had under care, in which he was using blood transfusions and had increased the blood count from one million to somewhat over three millions.

After the meeting the Society adjourned to partake of a delightful luncheon served by Mrs. Zaiser and the nurses of the County Hospital. The meeting was so successful that it is hoped that Dr. Zaiser will see fit to invite the Society in the near future to meet with him again.

Lieut. Davis returned to Camp Lewis after a short visit.

Capt. Wickett is in France in an evacuation hospital.

SAN BERNARDINO COUNTY.

The San Bernardino County Medical Society held its annual meeting at the University Club, the retiring president, Dr. B. F. Church, presiding at a dinner served in keeping with war-time conditions.

The discussion of social health insurance, the proposed state law to come up in November, developed a decided attitude against the proposed measure as inimical to public welfare. Other matters brought up for discussion were the new State League for the Conservation of Public Health and the Medical Corps and Volunteer Medical Corps.

The newly elected officers of the society are: Thomas M. Blythe, Redlands, President; R. S. Gibbs, San Bernardino, First Vice-President; W. B. Power, Redlands, Second Vice-President; C. L. Curtiss, Redlands, Secretary and Treasurer.

SAN DIEGO COUNTY.

Captain Thomas O. Burger, M. R. C., for some time stationed at Base Hospital, Camp Cody, N. M., is attached as surgeon to the recently organized unit of Base Hospital 94, destined soon to see service across the water.

Lieutenant Colonel Robert Smart has about completed organizing Base Hospital 96, which will soon proceed to the front. Dr. Smart is the first of San Diego's medical men to receive the commission of Lieutenant Colonel. The doctor has the advantage of previous experience in military medicine during war times.

The local boards and advisory board recently enjoyed a round table discussion on methods of draft examination participated in by men from Camp Kearny.

Captain George B. Worthington, M. R. C., has been detailed from Camp Kearny to the United States Hospital as surgeon in chief. Henceforth, men of the service whose families are here, left behind, can rest in the certitude that they will be adequately cared for.

Lieutenant Gordon T. Courtenay, M. D.,

Medical Corps, U. S. Navy.

Overwhelmed by the excess of his devotion, in the epidemic on the Atlantic seaboard, became one of its most shining victims and passed away two days before going upon high sea duty, Monday, September 23, 1918, aged 32 years.

As from the mists of ages arising
From the dull gray plain of men,
Like a sun-lighted hill your Heaven-lent skill
So oft has beaconed the way
Through the Valley of the Shadows,
Back from No Man's Land of pain
For many, O many, who mourn today.
These are they that you so oft have borne away
And safely back to home and life again.

Tell me were there no others, no stronger brothers,
To bear you back as you oft have others,
Back from war's pestilential rain?
Lost in the vale of your devotion
They searched and hunted—but hunted in vain.
Rest, my Brother, rest—we here and Over There
Undismayed, your light will carry on.

—A token from his fellow members of the San Diego County Medical Society.

(Every physically acceptable member is in the service.)

SAN FRANCISCO.

Proceedings of the San Francisco County Medical Society.

During the month of September, 1918, the following meetings were held:

Tuesday, September 3d—Section on Medicine.

1. Speech defects, from a pedagogic standpoint. Exhibition of cases. Mrs. Mabel Farrington Gifford.
2. Report of a case of singultus. H D'Arcy Power.

Tuesday, September 10th.

1. Pathological specimens: (a) Acute endocarditis; (b) tubercular kidney. George E. Ebright.
2. Anaerobic flora of war wounds. Karl F. Meyer.

Tuesday, September 17th.

St. Luke's Hospital Clinical Evening.

1. Diagnostic value of fractional stomach analysis in a series of 218 cases. E. V. Knapp.
2. Medical and sanitary conditions in the Orient. Lewis W. Allen.
3. Recurrence of stone in the kidney after operation. W. P. Willard.

SAN JOAQUIN COUNTY.

The regular monthly meeting of the San Joaquin County Medical Society was held at the residence of Dr. E. A. Arthur, Friday evening, September 27th. Those present were Dr. C. F. English, J. T. Davison, C. D. Holliger, W. J. Backus, Grace McCoskey, Margaret Smyth, B. F. Walker, L. Dozier, Mary Taylor, E. A. Arthur, R. R. Hammond, R. T. McGurk.

The paper of the evening was presented by Dr. E. A. Arthur on "Prophylaxis." The discussion was opened by Dr. Holliger, who gave an interesting résumé of the part played by serology in the establishment of prophylaxis.

At the conclusion of the paper Captain Hammond, who was home for a few days' leave gave a most interesting report of some of his experiences since entering the Service.

Notices

BULLETIN ON SPANISH INFLUENZA.

The Surgeon General of the U. S. Public Health Service has just issued a publication dealing with Spanish Influenza, which contains all known available information regarding this disease. Simple methods relative to its prevention, manner of spread, and care of patients, are also given. Readers may obtain copies of this pamphlet free of charge by writing to the "Surgeon General, U. S. Public Health Service, Washington, D. C."

The following is the program for the colloquia given by the joint committee of the Stanford University Medical School and the San Francisco Polyclinic, at the San Francisco Hospital, for the month of November, 1918:

November 7, Dr. Roderic O'Conner, ophthalmology; November 14, Dr. T. G. Russell, surgery; November 21, Dr. C. F. Welty, otology and larynx; November 28, Dr. F. B. Carpenter and Dr. W. E. Stevens, gynccology. Surgery 9 a. m. in the surgical amphitheater.

November 1, Dr. H. P. Hill and Dr. P. H. Luttrell, medicine; November 8, Dr. W. F. Schalter, neurology; November 15, Dr. H. H. Yerington, pediatrics; November 22, Dr. H. P. Hill, medicine. Medicine 9 a. m. in the medical amphitheater.

Very truly. yours,
WM. OPHULS,
Dean, Stanford University Medical School.

Programs for individual meetings may be obtained upon application to the Dean's office, Stanford Medical School, 2398 Sacramento street, San Francisco, California.

COLLOQUIA.

Owing to the epidemic of influenza which has now become a serious problem in our community, it has been decided by the Board of Health to use the San Francisco Hospital to the fullest extent possible to care for the influenza cases. In order to do this it will be necessary to curtail all surgery to only urgent cases. Consequently it becomes imperative that the colloquia that have recently been commenced and which have proved so successful, be discontinued for the present. As soon as the San Francisco Hospital is again available, a notice will be sent and the colloquia resumed.

Very respectfully yours.

The Joint Committee:
H. P. Hill, M. D.
Emmet Rixford, M. D.
Cullen F. Welty, M. D.
H. A. L. Ryfkogel, M. D.
William Ophüls, M. D.
S. Nicholas Jacobs,
Secretary.

Correspondence

LICENSE EXAMINATIONS IN FOREIGN LANGUAGE.

To the Editor:—Can a California physician be examined in English in Latin-America, in France or in Japan? If a certificate should be granted to a foreigner is there any legal provision whereby his practice could be restricted to his own nationality? Has the war already created such a deficit in professional men that we are obliged to remove all professional restrictions from those who cannot speak our language? Is it true that our country needs a larger element of those who cannot read or write our language and who, therefore, cannot absorb the "spirit" of America? Personally, I would answer all these questions in the negative. This country is already reaping the disadvantages of its concessions to foreign languages. The parochial schools in German, Spanish and other tongues have fostered an un-American spirit among thousands of our so-called citizens. Transitory visitors to our land should be treated with all possible courtesy but permanent residents among us should be required to adopt our language. Unification of language is one of the most important bulwarks of "National Spirit."

Sincerely yours,
(Signed) JOHN C. KING.
Banning.

To the Editor:— . . . I wish to state that my opinion is that all candidates should take the examination in the English language only. My reasons are so many I can not mention all of them,

but suffice it to say Americanize them or keep them out.

Sincerely yours,
ROBT. L. CRUM, M. D.

Los Angeles.

To the Editor:—Complying with your request in the September issue of the Journal, relative to the desirability of the State Board of Medical Examiners holding examinations for license in any language other than English: We practitioners of the State do not believe it desirable. "Americanize our foreign communities and bring them to American social standards."

(Signed) E. F. REAMER, M. D.

Modesto.

To the Editor:— . . . I do not think there is any argument at all. . . . My answer is America for Americans, and if they do not wish to become Americans—why did they come to the U. S. A.?

Yours respectfully,
W. H. C. HATTEROTH, M. D.

Oakland.

Military News

VOLUNTEER MEDICAL SERVICE CORPS OF THE UNITED STATES.

Authorized by the Council of National Defense; Approved by the President of the United States.

What is the Volunteer Medical Service Corps?

The Volunteer Medical Service Corps is an organization which provides means for obtaining quickly men and women for any military or civil medical service required in the war emergency. It furnishes recommendations and necessary credentials to assure the best medical service, both military and civil.

How should application for membership be made?

Upon request to the Volunteer Medical Service Corps, Council of National Defense, Washington, D. C., application blanks and circulars of information will be sent. When received, the application form should be filled out completely, in accordance with instructions contained in the circular of information. The application should then be mailed to the Volunteer Medical Service Corps, Council of National Defense, Washington, D. C.

What is to be gained by the creation of this organization?

Placing on record all medical men and women in the United States; aiding Army, Navy, Public Health Service, Provost Marshal General's office and the American Red Cross in supplying war medical needs; providing the best civilian medical service possible; giving recognition to all who record themselves either in Army, Navy, Public Health Service, Provost Marshal General's office, Red Cross activities or civilian service.

What is meant by classification?

It is the record of information furnished by the individual physician so that when the need arises, he may be requested to perform service that will be mutually advantageous to the individual and the service to which he may be assigned.

Who are eligible?

Every legally qualified physician holding the degree of Doctor of Medicine from a legally chartered medical school without reference to age or physical disability is eligible for membership in the Volunteer Medical Corps provided he or she is not already commissioned in the Government service.

How is eligibility to the corps determined?

Upon information obtained from application blanks, three personal references and the executive committee of the State in which the applicant resides. Based upon the information thus secured, the Central Governing board will finally pass upon applications.

Does membership in the corps carry with it rank and pay?

This corps is not authorized to bestow rank. Arrangements for compensation shall be made between a member requested to perform a specific duty and the agency requesting service. The matter of compensation and place of service, whether with or without rank, must be determined at the time said request is made. When a member of the corps accepts service in the Medical Reserve corps of the army, the Naval Reserve force, the United States Public Health service, the American Red Cross or any governmental department, he or she will be accorded the rank and pay incident to the service in the department in which he or she has enrolled.

Will any member of this corps be ordered to active duty?

No member will be ordered to render any service. Requests to perform specific duties according to qualifications and availability under the classification of the Volunteer Medical Service Corps may be made from time to time as emergencies arise.

What will be the probable character of service members who will be requested to render?

(a) Medical Reserve corps.
(b) Naval Reserve force.
(c) United States Public Health Service.
(d) American Red Cross.
(e) Local and medical advisory boards.
(f) State and local health departments.
(g) Medical schools and hospitals.
(h) Industrial plants.
(i) Civil communities.

Caring for civil communities, stripped of medical attention.

Caring for practices of physicians in military service.

Reclamation of registrants rejected for physical unfitness.

Service to needy families and dependents of enlisted men.

(j) Miscellaneous service.

When will physicians who are not classified for actual military or naval service be requested to perform service?

When the emergency arises the following may be requested to perform duties in accordance with their qualifications and expressed merits as indicated by the information contained on their application blanks:

(a) Physicians over 55 years of age.

(b) Physicians with obvious physical disabilities which are disqualifying.

(c) Those rejected for all government service because of physical disability.

What are some of the duties that this last group of physicians ineligible for active military service may be requested to perform?

(a) Deducting those members of the medical profession who will eventually be in active military, naval or public health service, fully 75 per cent. of the remainder will be encouraged to continue at their home duties.

(b) Some of these may be called upon to supplement their private practices by performing part-

time service to meet community needs hitherto performed by men called to active duty.

(c) Twenty-five per cent. of those not actually engaged in war service (possibly 20,000 in number) who are now engaged in home duties but who have agreed to do work of any kind anywhere, upon request of the Central Governing board will, as the emergency arises, be recommended for duty in the following places:

1. Local and medical advisory boards.
2. Medical schools and hospitals.
3. Industrial plants.
4. Health departments.
5. Communities lacking medical service.

How does enrollment in this corps differ from actual conscription?

The Volunteer Medical Service Corps is exactly what its name indicates. It is a gentleman's agreement on the part of the civilian doctors of the United States who have not yet been commissioned in the army or navy or enrolled in the Public Health service, or in the service of the Provost Marshal General, and a representative board consisting of government officials associated with lay members of the profession in which civilian physicians agree to offer their services to the government if requested to do so by the Central Governing board.

In what way can this corps aid the government?

By recording all physicians who are not yet in service and classifying them so as to utilize the talents and facilities of individuals to the best advantage and inflict as little hardship on the individual as possible, in accordance with the letter from the President of the United States authorizing the corps—"to supply the needs of the army, navy and Public Health service . . . aiding in the important work of the Provost Marshal General's office and Red Cross . . . and the problems of the health of the civilian communities of the United States." It provides a method by which every physician not in uniform will be entitled to wear an insignia which indicates his willingness to serve his government. It furnishes a method by which the medical needs of the nation may be provided for through a representative board of physicians who know the needs of the army, navy, Public Health service, Red Cross and civil communities.

To what extent must provision be made for essential civilian and industrial medical needs?

A large percentage of the physicians of the country will be required to care for their respective home communities and to meet civilian health needs. This percentage of necessity will be expected to maintain their home status and continue their professional work.

Will enrollment in the Volunteer Medical Service corps excuse a physician in the draft age from registration under the Selective Draft Service law or from being classified therein?

Positively not.

Why, then, enroll in the Volunteer Medical Service corps if it does not supplant the draft?

(a) Under the Selective Service law individuals in the draft age are registered and inducted into the service as privates. The Volunteer Medical Service Corps enrolls and classifies individuals as prospective commissioned officers and will, when requested, assist in establishing the individual's status when he requests transfer from the enlisted forces to the commissioned branches of the service.

(b) Enrollment in the Volunteer Medical Service corps definitely registers the physician as a patriot and provides definite governmental recognition of his willingness to serve.

Why should every physician in the United States enroll in the Volunteer Medical Service corps?

(a) The unsurpassed record of volunteer enrollment for actual service on the part of the medical profession must be maintained.

(b) The army and navy must not be hampered for a moment for lack of doctors to care for the sick and wounded boys fighting our battles at the front.

(c) The public health must be conserved.

(d) The medical needs of the Provost Marshal General must be adequately met.

(e) The great industries furnishing materials of war employing thousands of patriotic workers, must have medical service.

(f) The home folks, the old and the young wearily waiting over here, must have doctors.

(g) Recording, classifying, and careful distribution and full utilization of our entire profession of medicine will enable us to instantly supply all demands, and our utmost resources will then be available to aid in establishing a permanent peace that will forever make this world a safe place in which women and children may live.

FOR ARMY NURSES AT BASE HOSPITALS.

To give army and navy nurses a comfortable place in which to spend their hours off duty, the American Red Cross will provide special nurses' recreation houses at all large base hospitals, to cost about $350,000. Contracts have been let for 40, several of which are completed and some more are under contract.

These houses were provided as soon as it was learned that the nurses had no attractive rest rooms and were obliged either to stay in their bedrooms or to sit in a narrow corridor-like space set aside for them. In some of the camps the Red Cross not only has provided these houses but has secured cottages near-by in the mountains or at the seashore, where nurses, especially in need of rest, can go for a recuperative week end. The nurses keep house for themselves.

New Members

Genocchio, Edw. P., San Francisco.
Carpenter, C. R., San Diego.
Macpherson, J. F., San Diego.

Deaths

Courtenay, Gordon Trevor, San Diego. A graduate of Northwestern University Medical School, Ill., '08. Licensed here 1913. A member of the State Society. Died Monday, September 23, 1918, age 32, at sea.

Moss, Robt. E., a graduate of Marion-Sims Medical College, Mo., 1897. Licensed in California 1909. Died in Riverside, Calif., September 27, 1918.

Hurley, James Morgan, a graduate of the Cincinnati College of Medicine and Surgery, 1885. Licensed in California. Died September 25, 1918, in San Bernardino.

Bullard, Wm. B., a graduate of Bowdoin Medical School, Me., 1859. Licensed in California 1888. Died September 23, 1918, in Los Angeles, Cal.

Power, Florence B., a graduate of the University of Oregon, 1893. Licensed in California 1894. Died at the Plaza Hotel, San Francisco, September 29. The wife of Dr. H. D'Arcy Power.

Barr, James, a graduate of the Hahnemann Medical College, Chicago, Ill., 1880. Licensed in California 1895. Died in Los Angeles August 24, 1918.

Nichols, George C., a graduate of Rush Medical College, Ill., 1894. Licensed in California 1904. Died in Flagstaff, Ariz.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BUTLER BUILDING, 135 STOCKTON STREET, SAN FRANCISCO

Editor - - - - - - - - - - - ALFRED C. REED, M. D.

COUNTY ASSOCIATE EDITORS:

Alameda.....Dr. Pauline S. Nusbaumer, Oakland
Butte.....Dr. Edward Baumeister, Chico
Contra Costa.....Dr. U. S. Abbott, Contra Costa
Fresno.....C. O. Mitchell
Glenn.....Dr. W. H. Walker, Willows
Humboldt.....Dr. L. P. Dorais, Eureka
Imperial .....
Kern.....Dr. C. A. Morris, Bakersfield
Lassen-Plumas .....
Los Angeles.....Dr. Wm. Wenzlick, Los Angeles
Marin.....Dr. W. F. Jones, San Rafael
Mendocino.....Dr. O. H. Beckman, Fort Bragg
Merced .....
Monterey.....Dr. T. C. Edwards, Salinas
Napa.....Dr. Robt. Crees, Napa
Orange.....Dr. H. A. Johnston, Anaheim
Placer .....
Riverside.....Dr. Paul E. Simonds, Riverside
Sacramento.....Dr. Wm. A. Beattie, Sacramento
San Benito.....
San Bernardino.....Dr. C. L. Curtiss, Redlands
San Diego.....Dr. Robt. Pollock, San Diego
San Francisco.....Dr. René Bine, San Francisco
San Joaquin.....Dr. Dewey R. Powell, Stockton
San Luis Obispo..Dr. Paul K. Jackson, San Luis Obispo
San Mateo.....Dr. A. L. Offield, Burlingame
Santa Barbara.....Dr. R. M. Clarke, Santa Barbara
Santa Clara.....Dr. Chas. Richards, San Jose
Santa Cruz.....Dr. A. N. Nittler, Santa Cruz
Shasta.....Dr. F. Stabel, Redding
Siskiyou.....Dr. Wm. F. Shaw, Yreka
Solano.....Dr. A. V. Doran, Vallejo
Sonoma.....Dr. Elizabeth M. Yates, Santa Rosa
Stanislaus.....Dr. E. F. Reamer, Modesto
Tehama .....
Tulare.....Dr. J. T. Melvin, Porterville
Tuolumne .....
Ventura.....Dr. C. A. Jenson, Ventura
Yolo.....Dr. Frances L. Newton, Woodland
Yuba-Sutter .....

Contributors, subscribers and readers will find important information on the sixteenth advertising page following the reading matter.

VOL. XVI DECEMBER, 1918 No. 12

War at the Christmas-time is an anachronism. Happily, this Christmas season will be rendered infinitely notable by the advent of peace. The great War has yielded victory for humanity, justice and liberty. May every member of the California State Society of Medicine receive personal profit from the coming holidays, not in money, but in peace of mind, contented return to the ways of peace, consciousness of personal development and, above all, in a strong conviction of his own growing ability to render genuine human service.

1919 ANNUAL MEETING.

The Committee on Scientific Program is working on the 1919 meeting of the State Medical Society. The problems of rehabilitation and peace, together with the return of many members from the military, will make this session of universal interest and importance. It is needless to say that the attendance will be large. Preparation of a program that shall be worthy these stirring and strategic times is an onerous task. The Society is fortunate, however, in having a committee on Scientific Program which is a worthy successor of the excellent committees of past years. A program of unusual merit is assured. It is urged that all members desiring to report scientific work at this meeting, communicate *at once* with the Secretary of the Program Committee.

The Committee on Scientific Program consists of the following:

Dr. Fitch C. E. Mattison, Pasadena, Chairman.
Dr. E. C. Fleischner, San Francisco.
Dr. Lemuel P. Adams, Oakland.
Dr. F. M. Pottenger, Monrovia, Secretary.

Section officers of the State Society are as follows, Chairman and Secretary, respectively:

Section on Obstetrics and Gynecology, Drs. Frank Lynch and Lyle G. McNeil.

Genito-urinary Section, Drs. Wm. E. Stevens and L. J. Roth.

Eye and Ear Section, Drs. Mackenzie Brown and F. E. Detling.

Section on Nervous and Mental Disease, Drs. Milton B. Lennon and H. G. Mehrtens.

SHELL SHOCK.

The term shell shock is a misnomer and should be abolished according to an article on the nature of war nervousness in soldiers in "War Medicine," published by the American Red Cross, and the simple word nervousness substituted.

Under the heading of shell shock, says the author, have been massed cases of amnesia, anergic stupor, sleeplessness, nightmare, mutism, functional blindness, tremors, palsies, and further anxiety neuroses, occurring, not only under fighting strain but in individuals who failing in self confidence, suffer doubts and apprehensions while still waiting for transport overseas.

The term shell shock founded on false premises has served not only to suggest an incorrect etiology, but by its pitiful and romantic sound, has tended to perpetuate symptoms and to excite no determination in the mind of the sufferer to recover his control, or, in the fighting man still to endure. So far is it from making an appeal to conscience or to discipline, that it stifles both, and stultifies effort towards cure. The name is a mistake. We must be rid of it. Let us have instead a true term which will be neither a compromise nor a technicality unintelligible to the mind of the soldier.

The simple word nervousness comprises all the neurotic manifestations seen in war. It furnishes an appeal to the sense of discipline in the armies, and further promotes the growth of a public opinion, both military and civil, which would be of the greatest prophylactic and therapeutic power.

FEAR AND EPIDEMICS.

Verily a little knowledge is a dangerous thing, and when that little knowledge must serve as leaven for an Eddyistic lump of intellectual dough, it is small wonder, indeed, that mental and spiritual indigestion ensues. The San Francisco Bulletin has published a series of editorials under the caption above. Certain facts strike the reader with persistent force in their perusal. From these facts, debatable conclusions may be drawn. But let us first have out the facts.

"For, perhaps, the first time in history, the public is officially warned by the medical staff of a municipal hospital that fear of a disease is a serious pathological agent, capable in itself of producing sickness,—even death."

Yes, so the public is warned and has been warned by the medical profession for these many years. And so did Cannon demonstrate and establish on a clear experimental and scientific basis by careful laboratory investigation of the influence of emotions on physiology. And now, forsooth, "for the first time in history," etc. The writer should not have committed such an anachronism, unless, indeed, he was more intent on Eddyistic theories than on scientific fact. Too bad that an excellent and true idea, namely, that fear is an important element in disease pathogenesis, should remain for Eddyism to discover when, as a matter of record, it has been taught and practiced by physicians right along. Here, as in many another outstanding example, Eddyism takes a truth already recognized in science, garbles it, retouches it, dresses it in an illogical and distorting coat, and serves it up to the public as a gem of original discovery. The ignorance of scientific thought and work manifested by the writer of the Bulletin's editorials is characteristic of Eddyism.

With singular inconsistency for an editor but remarkably true to type for an Eddyite, another of these editorials states that "it is a fact well understood and fully attested by the best physicians that many illnesses and deaths are the result of fear." He seeks support from the profession he derides and inadvertently contradicts flatly his former argument that physicians denied all power to mental causes of physical disease. Then he goes on to argue that the epidemic is largely the result of fear, but does not follow this logically to its conclusion, and ends lamely, "Lack of fear will not, of course, give you immunity from any disease, but in the case of epidemics it will help." This is literally true and the golden truth is stated that fear is an element of importance in epidemics. It should, however, be stated that epidemics can and do spread irrespective of fear and often attack the fearless and leave the fearful alone.

Again it is stated that during the Chinese New Year season, drug stores and doctors are practically put out of business, and "the effect, as statistics demonstrate, is a period extraordinarily free from disease." The author of this editorial is hereby asked to produce the statistics. Until they appear, we are established in the conviction that no such statistics exist. The writer is qualified by considerable residence and study in central China to state that no such condition exists. Just as at our own Christmas holiday season, the less sick leave the hospitals and foregather in their own homes, and just as death and illness are not prominent, so at the Chinese New Year festival, the home seeks to draw back all its members and illness is discounted so far as possible.

Here again there is an element of truth well worthy of imitation. A healthy sane mental atmosphere is to be fostered and to such an atmosphere our Christmas holidays and the Chinese New Year festival are directly contributory. The lesson of mental hygiene thus inculcated ought to be remembered the year round and still, we would not have it Christmas always, nor would a year's continuation of these holidays be a beneficial thing. Doubtless the author quoted above would go on logically, if his courage permitted, to advocate permanent suppression of doctors and drug stores. This should, then, lead to tremendous improvement in public and private health, and be our most effective means of prolonging human life and reducing the death rate. When the general public, which really, after all, has a remarkably sane judgment, chooses such a health program, the medical profession will offer no resistance. In other words, the tangible results of scientific medical work are of such a nature that they appeal as good to any intelligence which is sane, logical, and well-balanced.

Once more, and finally, The Bulletin states: "All over the country the doctors are now having a well-earned rest. And yet their recent overtaxing labors were not without benefit to themselves, for they had no time to become ill of the 'flu." What miserable, sarcastic rot! What utter defiance of the long death lists of physicians all over the country who have given their lives for their profession! This all-wise and supercilious trifler with facts betokens a chaotic ignorance of the entire matter. Those tens of thousands dead of influenza pneumonia died of hysteria! Indeed! One need not put in speech the judgment of sane society on such piffle.

Now, permit a few observations likewise suggested by the series of editorials in the Bulletin. On another page, of one of these issues, appeared a "news item" emanating from an Eddyite spokesman, stating that epidemics, contagion and infection are affairs of the mind only, and that the native Asiatic who dies in the cholera epidemic, dies of fear, while the fearless European goes with impunity through the cholera camps. Did the sapient writer ever experience or watch the personal care of cholera patients under epidemic conditions? Does he know how far fearlessness will save him from infection in such conditions? Has he ever avoided yellow fever by advertising his fearlessness to the stegomyia? Has he ever treated pneumonic plague patients, wrapped in fearlessness as a mantle, instead of mask, hood and gown? The list is long and time is short. Does he, in fact, know the rudiments of what he is talking about? Ignorance speaks in a loud voice and fools rush in where wise men step carefully in the light

of such knowledge and skill as God-given faculties and abilities have brought them.

In the column adjoining this remarkable exhibition of non-Christian pseudo-science, is an advertisement extolling the virtues of S. S. S. in rheumatism. Why not apply a little absent treatment and present-day public-spirited business methods to the advertising columns? In one issue of the Bulletin containing one of the editorials quoted, were the notices of half a dozen advertising doctors, and some twenty-eight patent medicines. Presumably the mental health pabulum afforded is on a par with the virtues of Tanlac, S. S. S., nuxated iron, and the balance of the host of human life-savers spread to view in those columns.

There is virtue in the idea of mental health and hygiene, of spiritual poise and fearlessness, of mastery of body and mind. These represent the enduring ideal and hope of the medical profession. It is discouraging and nauseating to see these great truths warped and mishandled in half-baked ignorance by Eddyistic and other faddists.

DEPARTMENT OF INDUSTRIAL MEDICINE.

Beginning next month with the issue for January, 1919, the JOURNAL will institute a Department of Industrial Medicine. The reasons for this department are as definite as the functions it will endeavor to subserve.

Physicians have learned many lessons from their military experience. They have learned discipline and organization. This lesson will be speedily taken to heart in the approaching development of group diagnosis and treatment. The future organization of the profession will be compact and closely related to governmental insurance problems, industrial needs and a better understanding of public health needs. Doctors must organize as they have never organized before, or their economic independence will cease.

Physicians have learned many lessons in preventive medicine. The enormous impetus to industrial development in the era ahead, together with the large recognition of the responsibility of the public and the employer for the worker and his health, will force the physician to exercise an intelligent interest in industrial medicine.

It is safe to say that the language of industrial medicine and compensation insurance is today a sealed tongue to the majority of the physicians of California, especially outside the chief cities, and even there, exists a serious ignorance of the meaning and importance of industrial medicine. Occupational hazards, sanitation of industries, and hygiene of workers, are alike strange. The principles of industrial accident compensation, the part the State now plays and is destined to play, the practical opportunity and duty of the individual doctor, are unrecognized. He needs information on the elements of these topics. He needs to be kept informed of significant tendencies in these lines. He needs to keep in touch with industrial welfare work, both city and rural, both in California and elsewhere. He needs information on group organization. He needs must understand the function and opportunity of the physician in this enormous field, ranging from hygienic care and selection of workers, through occupational diseases and hazards, to the professional diagnosis and care of the victims of industry.

To meet these needs the Department of Industrial Medicine is planned. Contributions, advice, opinions, experience, are solicited.

RED CROSS HOSPITAL WORK IN FRANCE.

Both money and personal service are being lavishly spent by the American people in Red Cross hospital work in France. There are two kinds of these, namely, those that are a part of the United States army evacuating system, and those that are not. The first class numbers now about ten. These are designated as American Red Cross Military Hospital No. 1, 2, 3, etc. These are in charge of a United States Army commanding officer but are administered by the Red Cross. The superintendent is a Red Cross representative. The supplies, food and construction work are all furnished by the Red Cross, but the personnel is furnished by the army.

It is a part of the function of the American Red Cross to serve as the army's emergency depot. Anything the army wants from splints to hospitals, from diet delicacies to recreation huts, is supplied by them. So close, in fact, has been this cooperation between the Medical Corps of the Army and Navy and the American Red Cross that there has been much confusion in the public mind as to what was really army and what was Red Cross.

To the second class belongs the American Red Cross Hospitals, properly so called. These now number fourteen. They may be navy hospitals or hospitals for French and American soldiers connected with the French army evacuating system, or hospitals operated independently by the Red Cross for the wounded of the Allies. The army may take one any one of these at any time and convert it into an American Red Cross Military Hospital if for any reason such a change has become advisable through some change in the character of the sector in which the hospital is located.

The American Red Cross has children's hospitals and hospitals for the tubercular. Besides this, the Red Cross has some six hundred beds in its eight convalescent homes. Here every effort is made to give officers and men something of that atmosphere of comfort and cheer that would be theirs if they were able to be furloughed home for their convalescence. All reference to their hospital sojourn is avoided. The men are given music, tea on the terrace, outdoor recreation and in every possible way they are made to forget war until they are again fit to return to the fight.

Hospital hut service in France includes two distinct branches of service. Hot drinks are dispensed; cigarets, tobacco and chocolate are sold; music and entertainment is arranged, and a Red Cross library loans books and magazines. But in addition to this, the American women operating these huts are made hospital searchers whose task it is to find out in more detail something of the wounded and killed and send this information to the families at home. These huts are a Godsend

in fighting the foe of homesickness and keeping up the spirits of those weakened by wounds.

Another interesting phase of hospital service in modern warfare is the hospital on wheels, or the "autochar," as it has been nicknamed by Americans in France. There are also portable diet kitchens, disinfectant plants, dental ambulances, etc.; all moving with the advancing army, ready to give aid at the earliest possible moment.

At first our own wounded men were billeted in the French hospitals in the sector in which they were fighting. Now, however, they are evacuated to our own hospitals where they may have the care and attention of American doctors and nurses and may hear their own tongue spoken.

These wounded men must be helped to get back as soon as possible. The chief work of the American Red Cross right now is caring for our own wounded soldiers who have fought so valiantly in helping push back the enemy farther and farther. In close co-operation with the army, the Red Cross is working to supply a sufficient nursing service. Heretofore, none but graduate nurses have been eligible for overseas duty. There are now in France about 9000 of these.

By July 1, 1919, it has been estimated there will be need of 50,000 Red Cross nurses. In order to meet this tremendous emergency number, a call has come for nurses aides. Fifteen hundred of these are wanted at once for overseas service. The required training for this work consists of two weeks of intensive theoretical work and four weeks of hospital service. Women who for one reason or another are unable to go across can release others by carrying on the home nursing needs. This is as much a contribution to the speedy ending of the war as is the steady sailing of soldiers to the battlefields over there.

Every member of the medical and nursing profession who wears a Red Cross button and displays a Red Cross service flag during Christmas roll call week has not only renewed his membership in the American Red Cross but he has reminded the American people of his renewed personal service.

For no matter what may develop in the immediate future nor what may be the task ahead, the American Red Cross will continue its work of mercy and relief and it needs the entire nation behind it. The Red Cross Christmas roll call is a summons to this national support.

EDITORIAL COMMENT.

Remember that the correspondence department of the JOURNAL is an open forum for discussion, opinion, experience and advice. Be brief, have something to say, and send it in.

There is practically no evidence of eye injuries from moving pictures. If the eyes are normal, moving pictures cause less fatigue than concentrated reading for the same length of time. These facts are evidenced by the untold millions of persons who daily attend the movies, with no serious results reported, and but slight and infrequent inconvenience.

It is fatal blindly to accept authorities and to be ruled by their precepts. It is equally and more speedily fatal to cast them incontinently overboard. Safest is that man who builds up out of himself a critical sense of judgment to which he can invariably appeal for a correct evaluation of the matter presenting, with a clear consciousness that his conclusion will be essentially sound. This is the highest authority and its development is correctly and literally called education.

The disposal of excreta on railroad coaches and sleepers is a serious problem. The present method affords excellent opportunity for wholesale infection of water courses and water-sheds. Also the dust from excreta drying on the road bed is stirred up by each passing train and deposited with liberality on passengers, diners, food, stations, etc. Even the mail may become infected. Transportation of infected flies is also adequately provided for. All of these evils could be remedied by a Federal law requiring "sealed closets" in each passenger car, an improvement not difficult or unduly expensive to add.

With the influenza waning, and the Hun thoroughly thrashed, county societies should start a campaign of revivication and active growth. Larger membership, larger place in county affairs, political strength, rehabilitation, maintenance of medical ideals and standards,—all these ought to be discussed in live, aggressive fashion. County editors, too, will doubtless come to life and submit the monthly gist of interesting happenings which occur in every county. Why not let the rest of the state know about your local hospitals, especially those in small towns and rural communities? In such hospitals lies the future of medical practice. They unify the profession, educate the individual physicians, easily become community centers for health propaganda, and can be made to solve the difficult problem of group diagnosis and specialism in these communities.

The Bureau of the Census provides some interesting figures on birth statistics. In the recently established birth-registration area of the United States—comprising the six New England States, New York, Pennsylvania, Maryland, Michigan, Minnesota, and the District of Columbia, with an estimated population of 33,000,000, or about 32 per cent. of the total population of the United States—818,983 infants were born alive in 1916, representing a birth rate of 24.8 per 1,000 of population. The total number of deaths in the same area was 486,682, or 14.7 per 1,000. The births thus exceeded the deaths by more than 68 per cent. For every state in the registration area, for practically all the cities, and for nearly all the counties, the births exceeded the deaths, usually by substantial proportions. The mortality rate for infants under one year of age averaged 101 per 1,000 living births.

Physicians are informed by the Collector of Internal Revenue that, owing to the extent of the epidemic of Spanish influenza now prevailing in this country and consequent difficulty of persons in getting immediate medical attention and medicaments upon prescriptions issued by physicians, the provisions of Article 11 of Regulations No. 35 prohibiting the refilling of narcotic prescriptions are modified as follows:

Prescriptions calling for morphine, codeine, or heroin, which are written by registered practitioners for patients suffering from Spanish influenza and any pulmonary or bronchial affections, may, until further notice, be refilled, provided that at the time of issuance by physicians instructions are noted in the body of such prescriptions, "Repeat if necessary," and the druggist filling and refilling the same shall note thereon each and every date upon which such prescription is refilled.

Dr. Josephine Baker, Director of the Bureau of Child Hygiene, New York City Department of Health, says:

"Out of this work as we have so far evolved it in New York City we have taken two or three slogans to show in a graphic kind of a way what we hope to accomplish by the Children's Year. One is 'In any community no mother's baby is safe until every mother's baby is safe.' We have adopted the slogan of France 'Let no mother be forgotten and no baby ignored.' We have a slogan in New York City which we are pasting on our posters to go on the billboards 'For every soldier lost over there, save a baby over here.' That is the least we can do. When Secretary Baker came back from France about three months ago, he made the public statement that England during the first three years of the war had lost from death in active fighting, or in death from wounds received in warfare, 7 per cent. of her fighting forces. That meant less than 2 per cent. a year; less than 2 men out of every hundred actually killed in warfare each year. In the United States of America twelve babies under one year of age died every year. To put it in a graphic way,—'it is six times safer to be a soldier in the trenches in Europe than it is to be a baby in the cradle in the United States.'"

You may live to be 100 years old, but what's the use if you can't tell your grandchildren that you helped to lick the Kaiser?—Camp Dodger.

Physicians are, some of them, so pleasing and conformable to the humor of the patient, as they press not the true cure of the disease; and some others are so regular in proceeding according to art for the disease, as they respect not sufficiently the condition of the patient. Take one of a middle temper; or, if it may not be found in one man, combine two of either sort.—Sir Francis Bacon.

Special Article

BIRTH REGISTRATION IN CALIFORNIA.

A part of the Children's Year Program.

By ADELAIDE BROWN, M. D., San Francisco,
Chairman of Children's Year in California.

During the June drive for Children's Year, 53,561 California children were weighed, measured, and had a physical examination.

The medical profession in sixty-four towns and cities contributed this service; 513 doctors signed National Cards, which are now being tabulated by the National Children's Bureau.

This number of children means more than one in every five recorded births for the last five years in California.

Total number of births recorded in:

1917	52,230
1916	50,238
1915	48,075
1914	46,012
1913	43,802

The chart gives ten additional counties completing the weighing and measuring drive; the first twenty-nine were published in the September JOURNAL.

A test of birth registration has been made throughout the State. California is *not* in the registration area of the United States. To be in this area over 90% birth registration must be found by national officers. Our large cities are up to the standard, but no rural district approximates good birth registration.

The following reports will give an idea of the percentage of recorded births in various localities. The test was made only for children under one year of age, and the Bureau of Vital Statistics of the State Board of Health searched their records to show these results:

Counties.	Total Tests.	Per cent. not recorded.
Amador	92	33
Colusa	92	22
*El Dorado	61	3
*Humboldt	38	10
Marin	78	17.9
*Placer	57	7
*Riverside	22	5.5
*San Francisco	152	7.2
*San Joaquin	387	9
Santa Barbara	60	23
Santa Clara	754	17.9
*Shasta	41	9.8
*Sonoma	209	7.2
Stanislaus	151	26
*Tuolumne	45	6.7
Yolo	146	21
*Yuba	96	7.3

The carelessness in regard to birth registration is at the door of the medical profession. Comparatively few of these certificates were signed by midwives or parents. The value of the recorded birth certificate has not been realized as a pos-

*Over 90 per cent. recorded. Could be in Registration Area of United States.

1918—CHILDREN'S YEAR—1919
SUPPLEMENTARY REPORT ON JUNE DRIVE

County	Total Exam.	Total Defects	Defects Under 1 year	Defects 1-2 yrs.	Defects 2-3 yrs.	Defects 3-4 yrs.	Defects 4-5 yrs.	Defects 5-6 yrs.	Total Below H or W	Total Tonsil & Adenoid	Total Teeth	Health Centres	County Nurses
Amador	655	245	13	20	39	53	57	63	9	189	24	Plan	Plan
Del Norte...	115	85	0	18	18	20	11	18	51	44	16	Yes (1)	No.
Lassen	513	217	38	1	38	52	36	52	222	130	55	Doctors give time in office	
Napa	691	498	48	83	75	90	116	86	399	314	46	School Health Dep't	No.
Riverside....	538	...	Not segregated in report									Two	Two in Riverside
S.Bernardino	700	...	Not segregated in report									Three	(San Jose)
Santa Clara.	1236	376	35	30	54	68	89	100	66	236	51	Yes	Two (Palo Alto)
Stanislaus...	425	298	28	44	57	41	50	78	81	256	26	No	No
Sutter	412	56	2	7	9	8	7	23	95	37	8	No	No
*L. A. City..	4673	1530	144	174	225	289	342	356	355	1152	191	8 in op.	District Nursing
*L. A. Co...	2641	838	81	119	127	143	178	190	200	625	125		

*(Final report inclusive of preliminary)

Total No. weighed and measured: 12,599
Total No. complete medical examination, defects analyzed: 11,361
Total No. Defects: 4143, or 36 per cent.
Total No. below height and weight: 1478, or 13 per cent.
Total No. abnormal teeth conditions: 542, or 4½ per cent.
Total No. tonsils and adenoids: 2983, or 26 per cent.

session of the child,—a child's right—but the draft, school attendance, working privileges, and Americanization, all emphasize the value of a birth certificate, and in addition, an aroused medical conscience will soon put California on the Registration Area of the United States.

"Keep up our American Standards" must be the slogan of reconstruction, and every emphasis on the rights of the citizens is well placed now. If each doctor will fill out and record every baby's birth, the State will test out 100 per cent. in March, 1919.

ORIGINAL ARTICLES

INTRACRANIAL COMPLICATIONS OF DISEASES OF THE EAR, NOSE AND THROAT.—A REPORT OF SOME UNUSUAL CASES WITH AUTOPSY FINDINGS.*

By HILL HASTINGS, M. D., Los Angeles, Cal.

Symposium on Intracranial Complications of Eye, Ear, Nose and Throat.

Intracranial complications that have their origin in diseases of the nose and naso-pharynx are, in the majority of cases, due either to suppuration of the nasal accessory sinuses or to malignant growths of the naso-pharynx that spread into the cranial cavity with necrosis and suppuration as secondary results.

1. As to *suppuration of the nasal accessory sinuses as a cause of intracranial infection,* Onodi in 1911 (centralblatt fur Laryngologie) is quoted as having collected 106 cases in which cerebral abscess had occurred. It is not stated whether or not these included operated cases. Of the 106 cases, 82 were from purulent inflammation of the frontal sinus, 11 from the ethmoid, 4 from the maxillary antrum and 1 from the sphenoid. Very many cases of meningitis from purulent infection in the nasal accessory sinuses are, of course, not reported in literature. While it is recognized that such intracranial complications do occur, it is remarkable with all the cases of nasal sinus infection one sees in daily practice that intracranial complications do so seldom occur. One cannot but be strongly impressed with the fact that in proportion to the number of nasal cases, the number that result in intracranial complications is so extremely small. In many years of practice one seldom meets with a case in which an intracranial complication occurs from sinus disease. I can recall only two cases of brain abscess, both from frontal origin and both seen in consultation. I have not had a case in my own practice. The same is true so far as meningitis is concerned as a complication. On the other hand it is not so true when one comes to consider the number of intracranial complications that have resulted from radical operative measures in cases of chronic sinus infection. In such cases the mortality has been far too great in proportion to the number of cases operated. Here again very many fatal cases directly following radical sinus operations have never been reported. Take, for example, the problem of frontal sinus operation and consider the number of deaths following the Killian operation. Boenninghaus (quoted by Skillern) has collected 10 deaths in 375 Killian operations, or a mortality of 2.6 per cent. No one could ever imagine such a mortality from unoperated frontal sinus infection. Logan Turner on commenting on the deaths from the Killian operation expresses the opinion that the fatal meningitis is due to the spread of the infection through the internal bony plate, by reason of the curettement of the infected muco-periosteum of the sinus and the laying bare of bone cells with vascular pathways. The old Kuhnt operation, wherein the frontal sinus wound was left open to granulate from the bottom, although disfiguring when large cavities are dealt with, was nevertheless much the safer. It is safe to say that the era of external radical frontal sinus operations has about passed. For years American surgeons were led astray by over-enthusiasm for the supposedly efficient surgery advocated principally by the German and Austrian nose and throat surgeons. As to chronic ethmoid infection, here again one is struck by the comparative freedom from intracranial complications if no radical operation is attempted. And, as in frontal sinus infection, one is equally seriously impressed by the number of fatal cases that follow radical operations on the ethmoid. Just now, when radical ethmoid operations, of one sort or another, are being done it is timely to remember the experience of former days

*Read before the California State Medical Society, Del Monte, 1918.

of radical surgery on the frontal, and in remembering make us more cautious than ever in this surgical field. Here again it is true undoubtedly that the large majority of fatal results immediately following radical ethmoid surgery is not reported. For example, I have seen in consultation three such fatal cases and know of one other, none of which has been reported. In one case, a healthy woman of about 30, I was called in consultation at the suggestion of a neurologist who had been telephoned to for advice. The pseudo-specialist who had operated said he had been most successful in such cases. The patient, a healthy, strong woman, had been operated in his office 48 hours before. We found her unconscious with a spastic paralysis of one side of the body. There was a bloody opening through the ethmoid into the cranial cavity. While the untrained and inexperienced operator is the most dangerous, nevertheless a fatal result at times follows the work of an experienced and careful operator. In two of the other fatal cases no blundering surgery was done. The infection probably spread through the vascular pathways that were opened most likely by septic thrombosis of small veins leading into the cranial cavity. In the fourth fatal case mentioned the death was attributed to an old "latent tubercular meningitis," but inasmuch as the man was in good health at the time of the operation on the ethmoid and as a meningitis, evidently septic, rapidly developed (severe headache with fever and meningitis symptoms within 24 hours) one can but question the statement of a possible latent tubercular process. As to chronic sphenoid infection operative measures are nearly always confined to enlargement of the sphenoid ostium and a radical curettement of the muco-periosteum is rarely attempted, so that a chance for spread of infection is slight. The same applies to cases of chronic antrum infection, and here the location of the sinus, away from the cranial cavity, does not make an intracranial complication so possible.

2. *Malignant growths of the naso-pharynx.* It has been my opportunity to see five such cases. In three cases death occurred from intracranial complications, in two of which I was fortunate enough to see the post-mortem examination. In the other two cases the patients passed from observation.

1st Case, S. A. A., May 14, 1908, age 19, seen in consultation with Dr. Fleming and Mr. Macleish. The following history was given by Dr. Fleming: Family History—Father and mother living and in good health; an elder sister and younger brother healthy in appearance. A sister between the two, thin and feeble, looks tubercular. Personal History—Never ill except diseases of childhood; thin, tall and aged beyond his years. History of disease: On May 8, 1908, the patient came under observation complaining of pain in the right eye, right fronto. ethmoidal region and constant tendency to nose-bleed. Until six weeks ago had attended to farm work, enjoying his usual good health. About that time he began to have frequent bleeding from the right nostril, which he controlled by snuffing up cold water. Some two weeks ago he began to suffer great pain in the frontal region between the eyes, increased stoppage of the nose, nausea, insomnia and, at times, mental excitement. Physical examination: The patient presented the appearance of a very sick man. He was weak and unsteady in his gait, skin sallow, tongue a dirty brown and breath offensive. Tissues above and below right eye swollen and eyeball protruding. Pressure over lachrymal sac caused pus to appear at inner canthus. Right nasal cavity filled with dark grumous mass through which blood and pus exuded. Left side of nose blocked by deviated septum. On opening the mouth the right side of soft palate was seen to be bulging downward and forward; the naso-pharynx filled with a bluish mass which was very soft on palpation. Course of disease: Patient advised but declined to go to the hospital. Removed mass of imperfectly organized blood clots from the right nasal chamber. The following day, May 9, removed with Luc's nasal forceps a very large amount of broken down grumous-looking material from the right ethmoidal region. Considerable bleeding and flow of pus.

May 11th, operation repeated. Complains of pain in and about eye and back of head. General condition bad. Eye protrudes more than ever. May 12th, goes to California Hospital in the evening. May 13th, microscopic examination of blood by Dr. Leonard. Red cells 4,800,000; white cells 13,000; hemoglobin 90%; color index normal; differential count negative. On account of his mental dullness and inability to speak English, his examination notes are not full. The right eye is almost closed by swelling of both lids; eyeballs seem to protrude on raising lids. His tongue is dry, his mouth foul; soft palate bulging downward; right side of nose filled with bloody mass completely obstructed. His general condition is poor, dull, stuporous, fairly rational when aroused but with an anxious and restless appearance; no paralysis can be made out. Kernig sign is marked. Meningeal tache is marked. Temperature 101 degrees. Diagnosis of meningitis. Operation decided against. Lumbar puncture negative. From the time of admission to the hospital to the time of death, which occurred 44 hours later, temperature ranged from 101 to 102 (axilla). Pulse 68 to 110. Increasing restlessness and occasional delirium up to two hours before death, at which time he had a very free hemorrhage from the nose and naso-pharynx. This was followed by coma and death. Autopsy notes: Marked swelling of the orbital tissues especially on the inside. Calvarium removed. Upper surface of the brain looked normal. Under surface of the cerebrum showed pus here and there, especially marked in the interpenduncular space. Examination of the middle cranial fossa showed a marked change in

the anatomical landmarks of the body of the sphenoid and the greater wing on each side, due to a tumor mass occupying this region. The body of the sphenoid was occupied by a grumous mass fairly soft to the touch and no bony resistance felt. The curette passed into this mass, slipped downward into the naso-pharynx and right side of nose. On each side of the body of the sphenoid was found a mass of tissue resting on or taking the place of the greater wing of the sphenoid continuous with the central mass that occupied the body of the sphenoid. These lateral masses were white in color, coarsely fibular in structure resembling ordinary crab meat. That on the right side was about 1½ by 2 inches in dimension, extended forward to the anterior lacerated foramen and caused some considerable stretching upward of the optic nerve. The mass on the left side was similar in position and character but of less extent. All the sphenoid growth was under the dura and apparently springs from the bone or its covering. On curretting away the central mass through the body of the sphenoid the naso-pharynx and right side of the nose was found to contain semi-solid dark red clots of blood. The septum was pressed to the left, almost occluding the left nasal-fossa. The ethmoid of the right side was occupied by a grumous purplish mass bulging into the orbit. The right frontal sinus contained fluid yellowish green pus. (This was the only fluid pus seen except that on the base of the brain.) The left frontal sinus was normal. Specimens of the crabmeat-like growth on the right of the sphenoid were examined by Dr. E. L. Leonard, who reported spindle-cell sarcoma.

2nd Case. E. R., Sept. 12, 1906, age 42. Complaint: Paralysis of the 3rd, 4th upper two branches of the 5th and 6th nerves and some ear stuffing. History: Ear, nose and throat examination requested to aid in diagnosis. In the early part of trouble ear was affected and there has been some nasal discharge. General history given by Dr. Ross Moore as follows: Asthma for twenty years. Came from Illinois 13 years ago on account of asthma. Better of late since coming here. Normal weight 225. Six years ago began to lose weight until twelve months ago, April 10th, 1905, weighed 185. Was taken sick with chills and fever in December 1905 or 1906. Had trouble with right ear, worse when lying down, felt as if something rolled over in head. A short time after this the glands in the right side of neck began to swell. This was improved by Tr. Iodin and internal medication. April 19th, 1906—was operated on for supposed abscess on the right side of neck,—no pus found. Swelling had come up during one night and did not yield to poultices. Was well enough to work by June 25th and worked until August 1st, 1906, but did not feel well—felt as if he was losing ground. About the middle of July noticed that right nostril and right side of palate became numb, then right upper lip. At the same time he had a sensation as if a bug had flown into right eye and was moving around in it. This numbness has greatly extended. Four weeks ago suddenly began to have diplopia; things appearing side by side in lower field. At extreme upper limit of vision the field is normal. Two weeks later the right upper lid began to droop and this has gradually grown worse. For several years he has had occasional foul-smelling wax taken out of right ear. Never had dizziness, explosive vomiting, fever, or mental symptoms of any kind. Has not noticed diminished vision or hearing. For four or five months has had tasting discharge from naso-pharynx, dropping back into the throat. Knee jerk, elbow jerk and wrist jerk active and equal. Pupils react to light and accommodation. Palatal fold low on right side. Facial movements normal. Right masseter muscle atrophied. Right anterior half of tongue anesthetic to touch, taste and pain. Facial anesthesia as per diagram. Right ear hears watch 6 inches; left ear 2½ feet. Right eye shows tendency to turn downward and inward. Sept. 5, 1906—right eye shows tendency to turn outward. Two images above each other directly in front. Two images below on same level, one in front 1½ feet. No contraction of field vision. Dilated pupils from atropine. Ophthalmoscopic examination of the right eye,—disc not sharply outlined. No apparent opacity of fluid in anterior chamber. Arteries not clear. Epitrochlear glands not enlarged, nor axillary glands; neither spleen nor liver enlarged. A little dullness and roughness in upper part of left lung. Some bronchial breath sounds. Emphysematous chest. Pulse after examination 120. Sept. 8, 1906, anesthesia extending lower on face. Patient has had no temperature during 48 hours. Right eye ground more distinct. Anesthesia of face extending into lower max. div. of fifth. Right eye moves slightly downward and to the left Pupils equal and react to light. Ptosis complete. special ear history rather indefinite and of no significance. Ear: Six months ago had feeling in right ear as if something loose moved around. Never any ear discharge, noise, deafness or pain in the ear, but pain above in front of the ear for months, worse of late. No dizziness, no sudden vomiting, no chills or fever, no stupor, no dullness, no diminished vision, but diplopia. Nose: Some discharge from back of nose, not thick nor purulent, somewhat streaked with blood, not coughed up but hawked. No constant purulent discharge; no difficulty in nasal breathing. Throat: No special trouble,—little trouble in swallowing. Examination: Ear normal, except catarrhal changes. Nose: Normal except loss of sensation on right side. No signs of pus or polyp or any indications of suppuration of the accessory sinuses of the nose. Naso-pharynx—with mirror the mucosa of the vault of pharynx is seen to be red, thick and bulges downward. Palpation shows marked bulging of floor of sphenoid. Throat: Negative except glands (cervical) enlarged on both sides. Physical signs together with history exclude brain abscess or accessory sinus disease and points to a growing tumor of the sphenoid region, likely sarcoma. Bad prognosis expressed. Nov. 15—Patient seen again with Dr. Moore. Condition worse, has lost weight. Glands in the neck on both sides have enlarged considerably, bulging at the base of the sphenoid, causing symptoms of pharyngeal abscess. Considerable post-nasal discharge of bloody pus; pain in the head has increased, requiring opiates. Opinion again expressed that operation would be of no value. Died about Dec. 10th, 1906. Autopsy by Dr. Moore: Chest organs normal except black lungs from coal soot. Liver shows several white nodules with broken down centers. Nodules in mesentery. Skull cap rather adherent. Dura normal. Apparently whole right side of cerebrum softer than left but markedly so about Rolandic fissure. Vessels all engorged on right side. Left side of cerebrum easily lifted from base of skull. Much resistance on right side. Brain torn away from a fairly solid tumor as large as a hen's egg lying in the middle fossa encroaching on optic chasm. Tumor nodular and apparently attached to body of sphenoid bone. A portion of the body of greater wing of sphenoid bone removed with tumor. Microscopic examination of the tumor by Dr. E. L. Leonard showed a round-cell sarcoma.

3rd Case. B. R. L., July 21, 1910, age 52. Complaint: Pain in left side of head, hawking blood. History dates back to Nov. 1909. Began to snuff back little blood and had a tender, painful spot behind mastoid. Pain so severe now unable to sleep at night, except in short spells. About 6 weeks ago was treated by an osteopath. After treatment blood increased so he stopped. Spat up as much as a teacupful in half an hour. No chill or fever. No discharge from the nose. Had discharge from

right ear, slight amount, but none from the left. Deafness appeared in this ear since this trouble began. Deafness in right ear. Buzzing noise both ears. No cough. Weight 167. Apparently good health. Weight was up to 180 lbs. two years ago. Examination: Naso-pharynx, decided bulging to the left, oval in shape with two smaller bulgings on each side Mucous membrane seems slightly red but otherwise normal. No pus seen. Septum deflected slightly to the left, otherwise nose negative. Mt. left, dulled, retracted, scarred, no perforation, no pus seen. Pain referred to about 2½ inches above and behind external ear. No thickening seen or felt. Pain shoots at times upward to the top of the head and downward to the eustachian tube and behind neck. Right ear—slight sour odor to discharges. Canal swollen deep down, apparently covered in deeper part with granulations, blocking up good view of the drum. Granulations seen coming from the middle ear, evidently old chronic condition. Transillumination—Antra fair, orbits fair, pupils fair. Frontals moderate size, fair illumination. No pus washed out of nose. No pus either front or back. July 25, 1910—patient is still suffering considerably and spitting up little blood and he says pus which he thinks comes from left side of throat behind nose. The soft palate shows a decided tendency to rise to the right. Some sluggishness of the left side. Believe it is due to the thickening on the left side rather than to actual paralysis. Introducing finger into naso-pharynx shows swelling marked and spat up quite a little blood after using finger. Could not be sure of any fluctuation. Is taking K. I. one-half strength, 38 drops to a dose, increasing two drops each time. Also aspirin internally. Aug. 5, 1910. Ten days since last visit. Been unable to take any more K. I. for a week—upset his stomach. Feels, if anything, a little better, is satisfied not so much pain in head. Is not spitting up blood lately, none for three or four days. Not much discharge now. Slight streak of blood along pharyngeal wall left side. Bulging seen on the left side, seems to be on the line with the eustachian tube involving the posterior lip of it and extends upward to about the level of the floor of the sphenoid and slight swelling seen in the floor of the sphenoid. No soreness along the eustachian tube. Feb. 10, 1911, died. Note: Practically no medical attention several months before he died. Sister-in-law says he gradually wasted away, suffered a good deal of pain in the head. No paralysis or brain symptoms.

In the two patients that passed from observation each complained of pain and deafness in one ear. Examination in each case disclosed a tumor in the naso-pharynx, bulging downward from the floor of the sphenoid. Malignant growth was the diagnosis made in each case and operation not advised. One of these patients earnestly requested operation and I referred him to Dr. Harmon Smith of New York, May, 1911, who believed the growth was malignant. Dr. Smith reported by letter that he had removed a piece of tissue from the bulging tumor in the naso-pharynx which on microscopic examination proved to be a sarcoma. He referred the case to Dr. George Brewer who advised against operation. There were two negative Wassermann examinations in this case.

EAR CASES WITH INTRACRANIAL COMPLICATIONS.

No attempt has been made in this paper to review the commonly known intracranial complications such as meningitis, sinus thrombosis and brain abscesses secondary to middle ear suppuration. Attention is directed to

(1) A case of caries of the petrous bone secondary to chronic middle-ear suppuration. This case was reported by the writer in the "Archives of Otology" in 1906. It might interest you in reviewing the subject of this paper to show a photograph of the base of the skull and give a brief history of the case. The case made a lasting impression on the writer because of the fact that at the autopsy the real cause of the fatal meningitis was at first overlooked. In fact the writer had left the autopsy room with a feeling of chagrin at the failure to find what was supposed to exist. A determination to go back and search again resulted in finding this interesting petrous bone necrosis which had been entirely hidden by the firmly attached dura that covered the petrous bone. Only when the dura was carefully elevated from the bone was the honey-combed caries of the petrous seen. A photograph was at once made which shows very plainly the true condition. The petrous bone was honey-combed with purulent areas of caries to its very tip. A comparison of the two petrous bones in this photograph will show you better than a detailed description the unusual complication that caused death in this case. The history was briefly as follows:

A chronic ear discharge for many years in a man of about 70 years of age; sudden onset of pain and fever with marked mastoid tenderness. The patient was brought to the writer from a neighboring town,—the mastoid was acutely tender. A mastoid operation was at once done in the presence of the consultant, Dr. Wm. A. Edwards of Los Angeles, and pus and necrotic bone with foul cholesteatoma found to exist. The dura of the middle fossa was exposed by the caries. No evidence of brain abscess existed and the brain was not explored. After operation the condition of the patient did not improve; headache increased, the fever continued and nystagmus appeared. Delirium quickly followed and in five days the patient died of meningitis. The cause of the meningitis was supposed to be an acute labyrinthine involvement, or direct spread of infection from the mastoid area to the meninges or to a brain abscess that had ruptured. The autopsy failed to show a brain abscess and also failed to show any evidence of direct spread of the infection from the mastoid. The internal ear was not carefully examined at autopsy so that its condition was not determined, but labyrinthine suppuration undoubtedly existed. The petrous necrosis was found as related above. Several years afterwards the writer showed this photograph to Dr. Gorham Bacon, who expressed the opinion that in this case likely the petrous pyramid was unusually cellular (which sometimes occurs), and that the suppuration had gradually spread into the petrous cells from the middle ear. The mastoid disease being so evident it was but natural that the petrous disease was overlooked. At autopsy both petrous bones looked alike until, as explained above, the dura was carefully stripped off of the bones.

(2) A case of tempero-sphenoidal brain abscess secondary to chronic middle ear suppuration, operated successfully eight years ago. Recent attack of severe dizziness; demonstration of fistula in the horizontal semi-circular canal, reoperation; caries of labryinthine walls found; recovery. This brief summary is sufficient to bring out the main facts that prompt reporting this case.

G. C., male, age 35, seen at Santa Ana, May 1910, because of severe headache without mastoid signs. There was hardly any discharge and no odor. The M. T. was thick, not red, with an

old round perforation. Weber to the diseased side, hearing to forks and to conversation still exists, though reduced. No chill, no dizziness, no pain, exeept severe headache on the side of the diseased ear. Temperature 101 degrees; mental condition normal; no increased reflexes; no nystagmus. Intraeranial disease as the result of chronic suppuration was suspected as being the cause of severe headache and fever. The operative indications were discussed but, after considerable consultation, it was determined to defer operation for more positive signs. Five days later the writer was hurriedly summoned because of the development of slight delirium. The headaehe had continued severe with nausea and vomiting. Within an hour after the onset of the delirium the patient was stuporous with muttering delirium. Immediate operation disclosed caries and some pus in the deeper part of the mastoid. The exposed dura was thickened but not apparently bulging. Brain exploration upward and forward with a thin flat blade knife failed to loeate pus. Exploration upward and backward, however, struck the abscess at a depth of at least one inch from the outer surface of the brain. The patient made an uneventful recovery. In Sept. 1917, seven and one-half years after this operation, the patient was sent back to the writer by Dr. G. H. Dobson of Santa Ana because of dizziness and vomiting. The ear eanal contained pus and a protruding polyp. The patient had been free of symptoms for the intervening years except for a scanty ear discharge. Fistula test by gentle pressure produeed horizontal nystagmus to the opposite side. Caries of the semicircular canal was diagnosed and operation advised. The patient requested delay for business reasons. The polyp was removed, alcohol drops given and in a few days the dizziness had disappeared, as did also the fistula symptoms. Six months later, March 1918, the patient returned on aceount of severe dizziness and vomiting and pain and tenderness over the mastoid scar which was somewhat bulging and red. The fistula symptoms again were elicited not only by pressure in the ear eanal but also by pressure over the mastoid swelling which was demonstrated by the writer and also by Dr. E. W. Fleming, who was seen in consultation. Reoperation disclosed caries of the labyrinthine wall with fistula of the horizontal semi-circular eanal and also two fistulas in the faeial canal, one in its horizontal course in the inner tympanic wall and one in its perpendicular course through the mastoid. The tympano-mastoid cavity was filled with foul-smelling cholesteatomatous material and pus. The hearing test before and after operation showed no involvement of the eighth nerve. No labyrinthine and no facial symptoms followed the radical middle-ear exenteration. The patient has made an uneventful recovery.

DISPENSARY TREATMENT OF DIABETICS.*

ARTHUR STANLEY GRANGER, M. D., Los Angeles.

The problem of the treatment of ambulatory diabetics, particularly among the uneducated class, has always been a serious one. The educated individual can more often be made to realize the value of keeping within his or her sugar tolerance, while it is hard to impress upon the dispensary class the necessity of strict care in the diet; most of them not realizing its importance, so long as they can attend to their daily duties with a minimal amount of discomfort. It is with this group of dispensary patients that we have to deal in this paper.

Since the work of Allen and Joslin, it has been shown rather definitely that within certain limits, after a preliminary course of treatment, the diabetic can, by giving his co-operation, be treated satisfactorily at home, and enjoy health and attend to his business with comparatively little discomfort, and need report to his physician but occasionally. This applies to the average well-to-do individual, but what are we to do with those patients who either cannot afford to seek the advice of a specialist, or even afford to pay a general practitioner's fee, and in consequence come to the dispensary for relief? It is to such cases that the class system of treatment applies. This idea has been for some time in successful operation in Boston, New York and Chicago, and recently a class has been organized in the University of California dispensary in Los Angeles. The general plan is this: The patients present themselves, not individually, but as a class; the history of each is taken on a special blank provided for the purpose, and a general physical examination of each is made. They usually bring a specimen of urine the first day and this is tested for the sugar content, and for acid bodies. They are then told in simple language, such of the fundamental principles of the disease as they can understand, and of the results which may be expected to follow careful treatment and of the complications which may occur when treatment has been neglected. The importance of rigidly adhering to diet is strongly impressed upon them, and the necessity of absolute regard to the amount and kind of food outlined for them.

They are shown one of the simple tests for the detection of sugar in the urine (Benedict's solution is the one adopted) and the ferric chloride test for diacetic acid. Each patient is then instructed to bring to the next clinic a sample of a twenty-four-hour specimen of urine, a printed blank stating just how to collect this specimen being given each one. This twenty-four-hour urine is more carefully tested quantitatively for various abnormal ingredients and others of the more complicated tests done as the condition of the patient warrants. Should any patients present a type of the disease serious enough to require such special watching and attention as could not be given at weekly intervals, they are sent to the hospital, their sugar tolerance estimated and worked up, and only allowed to leave when they present sufficient evidence of being able to keep themselves sugar and acid free, under the weekly supervision of the clinic.

Cases of moderate severity are starved until the urine is sugar and acid free, and are then started on the following diet, a printed slip with the diet and instructions to eat or drink nothing else being given them:

Three eggs (two breakfast, one supper). Three ounces of meat or fish (dinner).

Two tablespoonfuls of 5 per cent. vegetables, two at a meal.

A clear beef or chicken broth without thickening or vegetables, to be taken three or four times a day.

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

Clear coffee, clear tea, and plenty of water.

Mild cases are immediately put on the above diet without preliminary starvation. If under this diet they remain sugar and acid free, the amount of food is increased. A diet blank on which is written the kind and amount of food to be taken the ensuing week is given each patient, and another slip with spaces marked off in which the patient records each day the amounts of carbohydrate, proteid and fat taken on that day, and whether sugar or acid bodies appeared in the urine. By looking over this chart at the end of the week and examining the urine, the physician in charge is able to tell whether the patients have overstepped the diet outlined for them, and if in any individual case the urine contains sugar, that patient is upheld to the class as an example of what happens when directions are not carried out. Should a new patient present himself with any of the complications, or should a complication develop in any member of the class as a result of over-indulgence, he is shown to the class as a warning.

By recording the weight of the patients each week and controlling the diet with the various laboratory and clinical tests, the sugar, protein and fat tolerance of each one is estimated and gradually worked up, and their diet correspondingly increased; so that in a short time they may know exactly the amount and kind of food they can and cannot eat, in order to remain sugar free and lead more or less normal lives. There is such a large variety of foods whose sugar content is within the limits of tolerance of the average case, and so many ways of preparing these foods daintily and in an appetizing manner, that the seeming hardship of constantly watching their diet soon becomes no more than a habit or routine with them, and most patients are so much more comfortable in every way when they remain within their tolerance that they will not willingly overstep their bounds. Separate cards are handed out from time to time with recipes for the palatable preparation of various diabetic foods.

Additional instruction on various topics is given from week to week as the needs of the class may suggest. They are taught how to weigh their food and instructed that all food must be weighed. This is not so great a hardship as first thought would indicate, for it is surprising how quickly patients, especially women, learn to estimate with exactness the weight and measurement of different foodstuffs merely by the eye. Again, weighed amounts of various foods are shown the class, and the corresponding amounts in tablespoons. Caloric requirements are explained and what gain or loss in weight means.

Results thus far obtained by this class method of treatment have been encouraging. During the past three months fifteen patients have presented themselves for treatment. The weekly attendance has averaged eight; two patients have left the city and a few feel secure enough to report but once in two weeks. The percentage of severe cases has been low. We have thus far had no patients under thirty-four years of age, and we deemed it necessary to send but two of the fifteen to the hospital for preliminary treatment. The average period of starvation was one and one-half days, two were starved two days, and one four days. Three cases were of such mild type that it was only necessary to curtail their diet in order to render them sugar and acid free. The average percentage of sugar in the urine was 3.8, the lowest .6, and the highest 7. The urine of seven, or 45 per cent., contained acid-bodies when they first appeared at the clinic.

It is interesting in this connection to note that the ammonia of the urine as measured by the Ronchese-Malfatti formalin titration test, and the carbon-dioxide tension of the blood plasma as measured by the Van Slyke apparatus, both bore a distinct ratio to the intensity of the color reaction in the urinary tests for acetone and diacetic acid. The percentage of blood-sugar done on ten cases averaged .17. Symptoms of polyuria, polydipsia, polyphagia, weakness, loss of weight and itching of the skin, were common to all. Two had fairly well-marked eye changes with failing vision; one a beginning gangrene; two a rather severe neuritis, in both cases affecting the lower extremities with severe burning sensation in the soles of the feet; one case, a man aged thirty-eight, persistently went on regularly-timed sugar sprees, visiting sweet shops like a schoolgirl; one patient with acidosis slept through most of the first meeting of the class, and one presented a marked furunculosis.

In every case but one, after the starvation period and a few days following of limited diet, the urine was sugar and acid free; the one exception followed this rule after a second period of starvation. During the first meetings of the class one or two patients showed occasionally a trace of sugar, but this either was due to ignorance or to sneaking a little forbidden food, thinking it would do no harm. On the other hand, it has been extremely rare for any who have attended six or more meetings of the class to have shown sugar in the urine at any time. The common symptoms of polyuria, polydipsia, polyphagia, weakness and itching have disappeared in every case without exception. Those with complications have so far improved that we now hear no complaint of them except the two cases with failing vision, both of which are markedly ameliorated.

Eleven patients were present at the clinic three weeks ago. In none could a trace of sugar or acid-bodies be demonstrated in the urine by the common methods of testing. At the start, ten of the patients were either totally incapacitated for work or were content to do a limited amount. At present all are attending to their regular duties. They keep track of their weight weekly, and thus far have had no difficulty in maintaining an equitable balance. The satisfaction all have shown with the diet outlined for them has been quite surprising. It is the exception to hear complaints of hunger.

Each patient tests his urine daily, both for sugar and acid-bodies, and reports if, on any day, the least change in the reaction occurs. If such change be present, they themselves now reduce the amount of carbohydrate or fat in their diet, as the case may be.

It is quite remarkable how quickly this class of

dispensary patients grasp the idea of what you are trying to do for them, and with what zeal they try to help themselves. This seems partly due to the fact that their untoward symptoms so quickly disappear when they remain sugar free for a short time and they are loath to do anything which will bring a return of their trouble. Such results are encouraging in spite of the mild type of the disease with which we thus far have had to deal; consequently, we feel that the work has been very much worth while, and the method one to be followed up and expanded.

CLINICAL RESULTS FOLLOWING PROPHYLACTIC TREATMENT WITH SILVER NITRATE FOR BLENORRHEA NEONATORUM.*

By ALFRED BAKER SPALDING, M. D., San Francisco.

Congenital blindness has been a plague of the ages. However, with the discovery of the gonococcus by Neisser in 1879, together with a report by him that he had found the gonococcus in seven cases of ophthalmia neonatorum, came the clinical statement in 1883, by C. F. Crede, that blindness of the new born could be prevented by the simple expedient of instilling into each eye at birth two drops of a 2% solution of $AgNO_3$.

It was soon quite generally noted that the Neisser diplococcus was the etiological factor in something over one-half the cases of purulent conjunctivitis of the new born, and in a much larger percentage of the more serious infections. Ahfeld in 1888 classified the eye infections of the new born into three groups:

1. Gonorrhea with bacteriologically proven Neisser infection. This group had several infections with many corneal opacities.

2. Conjunctivitis purulenta without the gonococcus. These cases all cleared up in two weeks with only slight danger to the cornea.

3. Conjunctivitis levis, a simple catarrhal inflammation having no association to the gonococcus.

From extensive bacteriological research it has since been ascertained that besides the gonococcus a large and varied group of organisms form the etiological basis for ophthalmia neonatorum. For instance, the pneumococcus, the diphtheria bacillus, the colon bacillus, the streptococcus, the Koch-Weeks bacillus, the staphylococcus, the pyocyaneus, the meningococcus, the Xerosobacillus, the micrococcus catarrhalis, at times in pure culture, often mixed infection, have each and all been reported in the extensive literature on this subject. Moreover, it has occasionally been noted that the pus from purulent ophthalmia is germ-free both on smear examination and by culture. Also some supposedly mild cases of gonococcus infection have by cultural methods been found to be caused by diplococci which resemble but which are different from the gonococcus.

For instance, in about three per cent. of the supposedly gonococcus infections, the infecting organism has been identified as the micrococcus catarrhalis.

Clinically it is often difficult to differentiate between the gonorrheal ophthalmia and the non-gonorrheal infection. Crede-Horder has described the non-gonorrheal ophthalmia as follows: Lids glued together, redness of the lid edges and of the conjunctiva. Massive swelling of the lids, purulent or sero-purulent secretion, white thin flakes on the conjunctiva palpebrarum, cornea clear, macroscopically no different from a beginning or an almost cured gonorrheal ophthalmia.

The more purulent character of the discharge and the changes in the cornea point to gonorrheal infection. Equally difficult at times will prove the bacteriological diagnosis of the disease.

The time of eye inoculation marking the onset of the disease varies in different cases. Usually the infection occurs after the membranes have ruptured and while the child's head is passing through the cervix and vagina. Several cases have been born with purulent ophthalmia. These reports have been severely criticized by Crede-Horder in 1913, who states that he has been unable to find in the literature a proven case of intra-uterine eye infection of the new born. The following case found amongst the records of the San Francisco Maternity of 1907, while offering some objections, points strongly to the possibility of intra-uterine infection:

Case Record. Mrs. K. C., age 39. Para VIII, S. F. M. Confinement No. 391. Baby born Sept. 24, 1907, with purulent ophthalmia of both eyes noted by attending nurse and students one hour after birth. Their note reads: "Eyelids oedematous, unable to get a good view of cornea. Right eye more inflamed than left. Both eyes swollen and in serious condition." This patient first came to the clinic July 31, 1907. There was no history of leucorrhoea, but no speculum examination of the cervix was made. Almost precipitate labor occurred on Sept. 24, 1907. The pains began at 3:45 a. m., the membranes ruptured at 5 a. m., the baby was born at 5:30 a. m. attended by a neighbor. The nurse and students arrived at the home at 6:30 a. m. and noted the condition of purulent ophthalmia in both eyes. Unfortunately, no smears or cultures of the eyes were made. The eyes were immediately treated with $AgNO_3$ 2% and boric acid. Following labor the mother made an uneventful recovery without fever. On the discharge examination, October 5, 1917, is found the following note by an interne: "Cervix bilaterally lacerated, no lochia, uterus very tender, both ovaries palpable and tender. The patient states she has had ovarian trouble for twenty years." The eyes were treated very energetically in the patient's home by a consulting eye specialist, and on discharge on October 5, 1917, there is noted that "there is slight discharge of right eye." The baby was further treated in the doctor's office and made a complete recovery.

Usually the signs of serious ophthalmia develop on the third to the fifth day post partum. Infections developing after this time are not always easy to explain. In these late infections if inoculation has occurred at labor, then either the child possesses some immunity or else the germs have a lessened virulence. Certain it is, that older children or adults infected by the gonococcus have more virulent infections than do these new born babies. Crede-Horder from histological studies accounts for the late infections, even where prophylaxis is used and the conjunctiva sterilized, to an inoculation of the Maibomian glands in the lids from which later the eye itself becomes infected. Secondary gonorrheal infection may occur at any time

* From the Division of Obstetrics and Gynecology, Leland Stanford Jr. University School of Medicine.

EYE INFECTIONS—1500 CLINIC HOME CONFINEMENTS

No.	Conf. No	Prophylaxis	Eye Affected	Day Noticed	Character of discharge	Result
1	49	$AgNO_3$ 2% and Boric Acid	left	5	Gonococci	Cured at C&C Hosp.
2	65	"	both	6	Gonococci	Cured at home
3	73	"	both	3	mild	Cured at home 9th day
4	89	"	both	6	doubtful	Cured at home 17th day
5	101	"	both	9	mild	Cured at home 10th day
6	106	"	both	7	mild	Cured at home 10th day
7	179	"	both	1	mild	Cured at home 11th day
8	182	"	right	8	mild	No treatment
9	183	"	right	4	mild	Clear 10th day
10	199	"	left	9	Gonococci	Right eye bandaged Cured 13th day
11	231	"	both	1	mild	Sl. discharge 10th day
12	266	"	right	1	Staphylococci	Coryza cured 10th day
13	385	"	both	8	Gonococci	Sister with sore eyes Cured 22nd day
14	391	"	both	at birth	Severe doubtful	Cured 10th day
15	487	$AgNO_3$ 2%	both	1	doubtful doubtful	14th day right eye clear Left eye, cornea hazy
16	502	"	both	5		Cured 15th day
17	559	"	both	4	mild	Cured 9th day
18	572	"	both	1	Gonococci	Taken to hospital 8th day Result?
19	628	"	left	3	doubtful	Cured 16th day
20	652	"	left	4	Koch-Weeks	Cured 10th day
21	701	"	both	1	mild	10th day right eye red Left eye discharging
22	764	"	right	10	doubtful	14th day sent to eye clinic
23	998	"	left	10	sterile	Cured 13th day
24	1095	"	right	6	Staphylococci	Not stated
25	1112	"	left	9	Gonococci	Sent to eye clinic
26	1140	Argerol 20%	left	3	doubtful	Cured 9th day
27	1144	"	right	10	doubtful	Sent to eye clinic
28	1181	"	left	7	Streptococci	Cured 14th day
29	1182	1 hr. P. P. 20%	both	1	Gonococci	10th day eyes injected
30	1186	None	left	3	Gonococci	10th day to hospital
						No report

EYE INFECTIONS—1500 CLINIC HOSPITAL CONFINEMENTS

No.	Conf. No	Prophylaxis	Eye Affected	Day Noticed	Character of discharge	Result
1	2	$AgNO_3$ 1%	both	1	doubtful	Baby died of lues 8th day
2	145	"	left	11	Staphylococci	Cured 13th day
3	147	"	right	4	Streptococci	Cured 15th day
4	121-15	"	left	15	Streptococci	Cured 20th day
5	129-15	"	right	10	mild	Cured 17th day
6	79-16	"	left	12	Streptococci	No treatment recorded
7	121-16	Not Noted	Not Noted	Not Noted	Gram diplococcus Gram bacillus	No treatment
8	136-16	$AgNO_3$ 1%	left	8	Bac Hofmanni	Cured 14th day
9	147-16	"	left	8	Staphylococci Aurens	Died 18th day Melena
10	150-16	"	right	8	Staphylococci Albus	Cured 14th day
11	158-16	"	left	7	No bacteria	Cured 19th day
12	177-16	"	left	8	Streptococci	Cured 16th day
13	139-17	"	right	8	Staphylococci	Slight discharge 11th day
14	145-17	"	left right	6 8	Streptococci	Cured 11th day
15	166-17	"	left	12	Staphylococci Albus	Slight discharge 15th day
16	49-18	"	both	6	Staphylococci Albus	Slight discharge 12th day

through carelessness of the mother or nurse carrying infection from outside sources to the baby's eyes.

From personal bacteriological studies I discovered some years ago that many eye infections were caused by the routine eye irrigations carried out by the nurse. At the present time in my service, nurses are forbidden to wash the baby's eyes, or clean the ears, or comb the scalp or do any other irritating thing to babies unless some distinct indication is present and the doctor in charge of the nursery orders such special treatment.

Previous to the routine use of silver nitrate as a prophylactic, ophthalmia neonatorum occurred in from 5 per cent. to 14 per cent. of births. It has been stated that at one time 40 per cent. of the blind lost their eyesight at birth. With the routine

use of silver nirate, conjunctivitis of the new born is an unusual occurrence and gonorrheal ophthalmia is a rarity. It is true that many reports are conflicting. Some clinics report several thousand deliveries without an eye infection while others will report as many as seventeen infections to each thousand births. If, considering all cases of conjunctivitis, the latter figure is more correct, but if considering only serious infections threatening the eyesight it is possible to report long series of births without infection. Much depends upon the technique used and the experience of the one instilling the silver nitrate. Some physicians fear that a prophylactic will cause inflammation or damage to the eye. This is not true if 1 per cent. silver nitrate is used and if the solution gets into the eye without mechanical damage to the cornea or lids by the fingers or instrument. From my experience in clinic work, I have never seen an eye lost in something over 5000 deliveries. When one considers that Noeggerath has found that 80 per cent. of all sick women have gonorrhea, that Sanger found 12 per cent. of his clinic patients with active gonorrhea, when Witte found amongst 1000 women in Martin's Clinic, 288 with gonorrhea, this experience must be due to the almost specific effect of the $AgNO_3$.

When students and nurses attend patients, even though well supervised there occur more cases of conjunctivitis than are found in hospital practice. To illustrate this I have reviewed carefully the Clinic records of the first 1500 patients delivered in their homes by the San Francisco Maternity. In this series are found thirty cases of conjunctivitis including several very mild infections and eight probable gonorrheal infections. For the first 410 cases $AgNO_3$ 2 per cent. was instilled into each eye (usually two drops) neutralized with boric acid. In this series are fourteen cases of conjunctivitis and four infections with the gonococcus. The series includes about one-half of all the infections noted and in part can be accounted for by the early lack of supervision as well as the use of boric acid to neutralize the $AgNO_3$.

In the second group, 930 babies were treated with $AgNO_3$ 2 per cent. without using boric acid. In this group are found eleven eye infections with two cases of gonorrhea. In a third small group of eighty-five cases, Argyrol 20 per cent. was used as a prophylactic but was soon discarded because of the poor results attained. In this small group there occurred five eye infections with two of gonorrheal origin. In the remaining cases sometimes 1 per cent., sometimes 2 per cent. $AgNO_3$ was used without eye infections.

For comparison with the above series I have reviewed the records of the first 1500 babies born in Lane Hospital since the beginning of the Stanford University Women's Clinic.

Here two drops of $AgNO_3$ 1 per cent. have been instilled in the eyes of all babies by the following technic: As soon as the head is born the lids are wiped off with boric acid solution.

As soon as the cord is dressed by the attendant, and before the baby leaves the delivery table, the interne holds the lids carefully open by means of dry sterile gauze. The nurse counts, "one, two" as she instills the $AgNO_3$ into the eyes, holding the dropper so as to avoid touching the baby's eye. The interne is instructed to note that the solution enters the eye sac and causes the usual white precipitate reaction. Nothing to neutralize the solution of $AgNO_3$ is used. In this hospital series of 1500 confinements there have occurred sixteen cases of ophthalmia neonatorum, several of which are undoubtedly secondary infections, as compared to thirty infections amongst patients attended in their homes by students and nurses. No case of gonorrheal ophthalmia has been met with, although several of the mothers had undoubted clinical signs of gonorrhea, in contrast to eight cases of gonorrheal ophthalmia met with in the home patients.

The following self-explanatory charts are submitted for comparing the infections as met with in the two series:

CONCLUSIONS.

From these statistics it seems justifiable to conclude that silver nitrate 1 per cent. instilled carefully into the eyes of the new born will protect them from gonorrheal ophthalmia and will cause no ill effects. So striking are the results that this prophylaxis should be made compulsory, not only amongst clinic patients but in private practice as well.

Lane Hospital.

ACUTE AND SUBACUTE UNILATERAL INFECTIOUS NEPHRITIS WITHOUT PYURIA FROM THE AFFECTED SIDE.*

By ROBERT V. DAY, M. D., Los Angeles.

In a recent contribution on Renal Infections, Keyes states the following: "Pus and bacteria are never absent from the urine excreted by the infected kidney, exception made for perninephritis, and about 5 per cent. of cases of focal suppurative nephritis. These are so hyperacute that they produce symptoms due to suppuration within the parenchyma without discharging any appreciable pus into the renal pelvis." I take it this may well express the observation among urologists in general. The same author believes that, to quote verbatim, "Acute pyelitis does not occur without suppurative nephritis any more than does acute nephritis without pyelitis, but lesions in the pelvis may predominate."

Parenthetically I may say I have studied by clinical urologic methods and later by the nephrectomized kidney, several cases which do not properly come under the classification of this paper but which showed absolutely no evidence to the naked eye of pyelitis, and yet there was acute diffuse nephritis from multiple infarcts without even the smallest area of necrosis macroscopically.

These fortunately are cases easily diagnosed by pain, tenderness and rigidity in the costovertebral angle, diminution or total loss of function with pus and bacteria on the affected side, and the general clinical picture of sepsis. But the striking thing about these cases is the absence of pyelitis

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

observed macroscopically, although the urine from that side contains some pus cells and bacteria.

The study of a case about to be described was my excuse for presenting this paper,—not that it is unique, but to bring forth from the members of this section data concerning similar cases.

Mrs. W. E. C., patient Dr. F. L. Anton; seen May 17, 1917. Temperature for past month ranging from 102 to 104 in the afternoons, occasional chill, pain and tenderness over left lumbar region. Leucocytes 22,000, 78% polys. She had had a similar attack one year before, lasting three weeks. No kidney tumor could be felt—but she was quite tender and rigid. Urine faintly acid, contained a small amount of albumen, a very little pus, moderate number of colon bacilli and a few red blood cells.

Cystoscopy: Very mild cystitis over trigonal area—equally marked on both sides. Both ureteral meati looked alike.

KIDNEY STUDY.

Right.	*Left.*
'phthalein appeared in 4½ minutes.	'phthalein appeared in 6½ minutes.
16% 'phthalein in succeeding 20 minutes.	6.5% in succeeding 20 minutes.

There was a bladder leakage of 'phthalein of 2% in the same 20 minutes.

CHEMICAL EXAMINATION.

Right side.	*Left side.*
Urea 26.4 gm. per liter.	7.1 gm. per liter.

MICROSCOPICAL.

Right side.	*Left side.*
No pus cells.	Leucocytes—estimated at one to two hundred red blood cells.
No colon bacilli or other organisms.	Polyuria amounting to three times the amount secreted on right side in a given time simultaneously.

PYELOGRAPHY.

Right.	*Left.*
Side looks normal except possibly overlaping of calicyes.	None obtainable.

Thinking there might be some error in technique, I inserted a No. 7 catheter in left side on the following day and was again unable to obtain a pyelogram—the shadow stopping not higher than the uretero-pelvic junction. Incidentally she was a rather large woman, weighing about 165 pounds, and it would be difficult to get the best pictures in any event.

OPERATION MAY 22, 1917.

We found an enormous kidney on the left side which was exceedingly difficult to deliver. She made an uneventful recovery, although I have not personally been able to get her history during the last six months. The kidney was fully twice the size of a normal kidney in a woman of her size. There were no necrotic areas under the capsules or any portion of the kidney. Cultures taken from sectional surfaces after the method of Rosenow were negative. The final diagnosis reported by the pathologists (Drs. Brem and Zeiler) was multiple infarcts, but such a diagnosis could not be made macroscopically from sections. The great tension within the capsule could well account for inability to obtain a pyelogram—it simply backfired. The pelvis was normal in shape and appearance and showed no macroscopic evidence of inflammation.

RESULTS FROM PERTUSSIS VACCINE

By J. C. CONDIT, M. D., Healdsburg, Cal.

The following report on the use of pertussis vaccine for prophylaxis may be of general interest:

At the Boys' and Girls' Industrial Home and Farm, Lytton, California, two hundred children are cared for, ranging in age from nine months to eighteen years.

In June last, whooping cough being prevalent in the neighborhood, I inoculated twenty-eight of the younger children, their ages running from nine months to seven years. They received three injections of 50 million, 100 million and 250 million at three-day intervals.

About August 1 the first cases of whooping cough developed, three of the older boys being affected. Beginning August 6 I inoculated all those not previously treated who gave no history of having had the disease, one hundred and twenty-eight in number. These received three injections of 500 million, 1000 million and 2000 million at forty-eight-hour intervals. No reactions occurred. One boy of eight by mistake was given two injections the same day but no reaction followed.

Within two weeks eleven cases developed among them and ten days later one more case was reported. Since then there has been no further spread of the disease. One among the twenty-eight little children inoculated in June was affected.

The children were practically all exposed, as they met in the common dining-room with the three first affected a week before these were isolated. Those who developed the cough were placed in a separate cottage but the isolation was relative only.

Five who had active pertussis at the time of inoculation had less severe paroxyms thereafter. One boy went through the attack without vaccine treatment. His case ran the most severe course of all. Those who developed the cough after being inoculated had the disease in light form. At present, September 21, there is no whooping cough at the home. The epidemic seems to have been controlled by the use of vaccine.

TOBACCO SMOKE AND TUBERCULOSIS.

The **American Review of Tuberculosis** for April publishes an editorial on tobacco smoking and pulmonary tuberculosis, the occasion of the comment being Major Webb's recent report on the incidence of clinical tuberculosis in smokers and non-smokers. In a body of 3,000 young men the percentage discharged from active army service because of active tuberculosis was no higher among smokers having bronchi than among non-smokers without this sign. The well known fact that the common cold and other catarrhal conditions are frequently followed by outbreaks of pulmonary tuberculosis is probably responsible for the idea that any local inflammatory condition favors the implantation of the tubercle bacillus as well as of other microorganisms. However, an area of inflammation is probably not a locus minoris resis-

tentiae, but rather a point of heightened resistance to fresh infection. The tuberculosis problem is twofold, being concerned not only with infection but with metastasis. Conditions of stasis are favorable to the development of a point of tuberculous infection but unfavorable to its extension, whereas movement with rapid circulation of blood and lymph are to be considered unfavorable to the initial implantation of the tubercle bacillus but favorable to its spread if once established. Inflammation may be considered on the one hand as creating conditions of increased resistance to infection, or by means of hyperaemia and increased circulation as favoring the kinetic conditions about a point of existing infection. It is not to be doubted that while just enough and perhaps too much inflammation is bad for a tubercle, a little bit of inflammation either exerts no deleterious effect on it or may indeed be good for it.

In the tobacco smoke inhalers we have a comparatively mild irritation repeated often over a long period, with the probable result of a chronic inflammation of low grade, which of itself may only aid in the process of repair around a tubercle.

The argument, of course, applies only to the local irritating effects of smoking and not upon the constitutional effects which may also have a bearing.

Book Reviews

Hygiene for Nurses. By Nolie Mumey, M. D. C. V. Mosby Company, St. Louis. 1918. Price $1.25.

This work is a combination of hygiene and bacteriology that may be found useful for reference. It contains interesting sections on heredity, Mendel's law and immunity. Unfortunately, much of its content is too superficially treated for the book to be of value as a text-book in schools that comply with the Standard Curriculum for Schools of Nursing; for examples: While the names of commonly used disinfectants are given the strengths in which they should be used and the lengths of time that they require to disinfect are lacking and, in the section on ventilation, it is stated that "the wind in passing over chimneys will draw impure air out."

A Text-book of Physiology for Nurses. By William Gay Christian, M. D., and Charles C. Haskell, M. A., M. D. St. Louis: C. V. Mosby Company. 1918. Price, $1.75.

This work, as the authors claim, is an elementary one. It will be found a useful text-book for beginners in schools where physiology is taught separately from anatomy. It contains 34 illustrations, some of which are particularly good.

Surgical and War Nursing. By A. H. Barkley, M. D. (Hon.), M. C., F. A. C. S. St. Louis: C. V. Mosby Company. 1918. Price, $1.75

The author states that "The primary intention is that this book will take an intermediate position between a reference and text-book and that it will find favor with the student of nursing as well as the graduate." Those responsible for the nurses' instruction, however, are hardly likely to echo this wish, for the book contains many expressions and statements that they would not permit their pupils to use. Here are examples: "Catheters are both male and female." "In nursing a case in which there is pus." "Disinfection of a room that has been vacated by a patient should always take place and should not be occupied by another until the process is complete. This may be done by closing the room tight and burning sulphur candles." The majority of ancient and modern treatments are mentioned in the book, but only a few of them are described; this, however, is probably fortunate, considering the description that is given of making a poultice, which is as follows: "Place the flaxseed in a cup, pour in enough boiling water to make a paste, then heat and stir for a short while and spread thick between layers of cheesecloth or light cotton."

Essentials of Dietetics; Textbook for Nurses. By Maude A. Perry, B. S. C. V. Mosby Company, St. Louis. 1918.

This book contains chapters on the chemistry of food, chemistry of cooking, nutrition, the care and preservation of food, food requirements in health and disease. Though the subject matter is the same as that contained in the majority of textbooks of dietetics prepared for nurses, this book will be a welcome addition to nurses' libraries, for the topics are discussed in a clear and definite manner, and there are questions at the end of each chapter which pupil nurses will find helpful when studying.

Nursing in Diseases of Childhood. By Carl Leo-Wolf, M. D. St. Louis: C. V. Mosby Company. 1918. Price, $2.50.

Nurses will find this book of assistance in their study of Pediatrics, especially as the normal child and the care necessary to keep it well are more fully described than is usual in books of this type. Other valuable assets of the work are: The descriptions of the preliminary symptoms of those indispositions peculiar to childhood, which, unless recognized and properly treated, may become exceedingly serious; the chapter on public health nursing—written by Mrs. A. L. Hansen, R. N., Superintendent of the District Nursing Association of Buffalo, N. Y.—and that on mental hygiene of children—by H. G. Matzinger, M. D.

Practical Dental Metallurgy. By Jos D. Hodgen. Fifth edition. Revised by Guy S. Millberry. St. Louis: Mosby. 1918. Price, $2.50.

This book is essentially for dental students and as such is one of the very best, being used by seven of the university dental schools and the majority of all Class A schools in the country. It is more or less a condensed treatise on the subject of metallurgy, dealing chiefly with such portions of the science as are of value to the student and practitioner of dentistry. However, it may be found to be a valuable reference book to others. The authors are not metallurgists, but being themselves practitioners of dentistry, are in a position to know what is and what is not applicable in the practice of dentistry. Hence, they have taken from general texts and other authoritative sources and compiled this valuable dental text. J. E. G.

Oral Sepsis in Its Relationship to Systemic Disease. By Wm. W. Duke. St. Louis: Mosby; 124 pages. 1918.

Duke aims "to present as briefly and clearly as possible the complex relationship which frequently exists between infections of the gum and alveolar process and certain systemic disorders." And he indicates that the dental surgeon who understands the problems and aims of the physician will be willing to sacrifice apparently useful teeth for the sake of the patient's general welfare. Dr. Duke points out that few men of fifty years who show advanced stages of dental sepsis are normal physically. He shows clearly how pyorrhea alveolaris and alveolar abscesses form foci from which infection may spread "by direct extension to adjacent tissues, by transportation along mucous or serous surfaces, and by metastatic infection through the medium of the blood stream and lymph with the final involvement of distant organs." To such spread of infection, especially to that of the last type, the author traces many systemic complications. Of the devitalized teeth examined by Dr. Duke, 81 per cent. might furnish foci of infection. Dr. Duke shows that though the organisms are

(Continued on Page 531.)

held local, a large part of the time they "repeatedly find abundant opportunity to multiply rapidly, invade the blood and gain lodgment in distant structures." All this would lead to the conclusion that chronic foci from which infection may spread should be removed. And the fact that systemic sequels may develop insidiously and become diagnosable only in their advanced stages, immeasurably strengthens the conclusion. But Dr. Duke draws no such conclusion. Herein lies the weakness of his volume. Having emphasized the various systemic ills which anyone with devitalized teeth may be heir to and having indicated that dentistry in the future must have as one of its chief aims the prevention and cure of disease, he allows that the problem of the correct treatment of devitalized teeth is still an open one. All this seems to lack the courage that should be born of conviction. Positive cultures of pathogenic micro-organisms isolated from the root ends of dead teeth seem to mean little to Dr. Duke. He knows that a lesion metastatic to a dead tooth may develop insidiously, but he would do nothing until that lesion has reached that advanced stage at which it is diagnosable. Two other points should be emphasized: (1) The improvement in general health following the conservative method of treating dead teeth will be found to be merely temporary. "Conservative means" which do not eradicate streptococcal foci will result in no **permanent** improvement. (2) Negative roentgenograms are not positive evidence of a lack of dental sepsis. Negative roentgenograms are of little value; positive ones never show more than two-thirds of the bone disintegration that is found during the dissection operation. Cultures from the ends of dead roots secured during the dissection operation are always positive. Dr. Duke's volume, then, presents valuable information about systemic diseases resulting from oral sepsis; but it seems not only to tolerate, but even recommends the methods of treatment which have been largely responsible for systemic disease. J. N.

Medical Vocabulary. By Joseph Marie. Philadelphia: P. Blakinston's Son & Co. 1918. Price: 50 cents net.

While many of us can speak French with a fair chance of having a Frenchman understand us, and a few of us can speak a little Italian, it is hardly probable that any of us have more than a meagre knowledge of medical terms in these languages. To supply this very obvious lack, this little Medical Vocabulary will fill a long-felt want and, while military activities may cease for the time being, medical activities no doubt will continue for an indefinite period. Italians will continue to have "un infreddatura nel capo" or a cold in the head, while the French, after association with American soldiers will undoubtedly develop a "penchant" for "pistache de terre," or the famous American peanut. I recommend that every soldier immediately purchase one of these books. S. P.

Anatomy of the Human Body. By Henry Gray, F. R. S., Fellow of the Royal College of Surgeons; Lecturer on Anatomy at St. George's Hospital Medical School. London: Twentieth edition, thoroughly revised and re-edited. Lea & Febiger. 1918. Cloth, $7.50; leather, $9.00

The works of Hippocrates and Galen were to the ancients what Gray's Anatomy is to the modern medical student. It has run through twenty editions and now stands as a monumental work on this most essential subject. The present edition has been thoroughly revised by Warren H. Lewis, Professor of Physiological Anatomy at Johns Hopkins University, and his services have added greatly to the value of the work. It stands pre-eminently the best of all round text-books in anatomy in any language. S. P.

Quarterly Cumulative Index to Current Medical Literature. Is published by the American Medical Association the middle of April, July, October and January. The April number indexes the journals issued during January, February and March; the July number contains in one alphabet references to journals published during April, May and June, with the addition of all that appeared in the April issue of The Index. Thus the July issue supersedes the April, and similarly the October issue supersedes the July. Each quarterly number is an inclusive index to the literature of the year up to the month of publication. The January issue is an index to the literature of the preceding year and is bound in cloth for permanent preservation.

Authors and subjects are arranged in one alphabet on a true dictionary plan. At no time during the year is it necessary to consult more than one alphabet to learn what articles have been written by a certain author during the year, or what articles have been written on a given subject during the year. Thus every quarter the literature of the year is brought up-to-date and made accessible for ready reference. S. P.

Military Hygiene and Sanitation. By Frank R. Keefer, Colonel, Medical Corps, United States Army; formerly Professor of Military Hygiene, United States Military Academy, West Point. Second edition, reset. 12 mo. of 340 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, $1.75 net.

The second edition of Colonel Keefer's text-book appears at a time when this subject is better understood and appreciated by everyone. Most of us are directly interested in the welfare of some particular individual who is at this time being governed by the rules laid down in this text-book. The present edition contains many things which have been brought out by the military experiences of the past four years, and subjects are dealt with which naturally could not be covered in the first edition, especially those relating to trench life. To anyone interested in the proper hygienic care of men living under unnatural and temporary conditions, this book will be of great value, particularly as it is written in a style easily understood by those who have not had a technical medical training, yet who realize the value of the rules of health. It would be a good text-book for high schools, agricultural colleges, and institutions devoted to mining and civil engineering. G. H. R.

Correspondence

INFLUENZA PREVENTION.

Subject: Influenza Epidemic.

To the Editor:—In view of the present serious epidemic which is sweeping over the country, the Volunteer Medical Service Corps earnestly invites your attention to the following important action:

Urge upon the members of the Volunteer Medical Service Corps that they instruct families under their care to guard against the epidemic by: Thorough cleanliness of houses, premises, clothing, utensils, and personal cleanliness. Avoid stirring up dust. Wash, scrub, flush, sprinkle, and use soap and water thoroughly. Gargle and spray the nose and throat with an alkaline antiseptic fluid frequently. Co-operate at once to the fullest extent with the local, state, and national Board of Health. Urge and co-operate in preparing towns and cities for the epidemic by establishing emergency hospitals in suitable buildings, by districting communities, and apportioning or dividing medical forces comprising men and women physicians and nurses so that no portion of the community is without medical care. Circulate as thoroughly as possible and explain to the public the warning and directions printed by the United States Public Health Service and by local health authorities. Urge the importance of

fresh air and avoidance of chill and overheat. In fighting the epidemic give no medicine and use no treatment which may depress the vital forces, especially the heart of the patient. The Army and Navy are fighting and conquering Germans. We must fight and conquer germs without taking anything away from the Army and Navy. Don't ask the Army and Navy for medical and surgical supplies. Use simple utensils for sterilizing; the simplest kinds of beds and bedding; make your own masks and dressings, and fight for yourselves. While the epidemic is on, do no surgical operations unless absolutely necessary to save life. In every way in your power urge the members of the Volunteer Medical Service Corps to co-operate to the fullest extent with the United States Public Health Service and with state and local health authorities.

EDWARD P. DAVIS,
President Volunteer Medical Service Corps.

October 16, 1918.
Council of National Defense, Washington.

October 31, 1918.

To the Editor:—Experiment and trial seem to prove that the Iodides taken internally are a practical preventive of influenza. The remedy is simple and can be taken in small doses (which seem to be sufficient) by practically anyone. To be more definite I give adults one to two grains daily of one of the common Iodin Salts, such as Iodide of Sodium or Iodide of Potassium as a prophylactic; this may be given either in solution or capsule. To children of six or seven years, on account of its easier administration, I give the Syrup of Hydriodic Acid, in doses of one teaspoonful in water daily, younger children smaller doses. The same preparation of Iodin in teaspoonful doses daily, appears to protect adults also. This experience has been confirmed by several other local physicians to whom I communicated this information and who thereupon prescribed the same remedy to their clientele. Several thousand individuals here have received Iodin internally as a prophylactic and so far as known no one who has taken this remedy faithfully, contracted respiratory grippe.

This prophylactic is readily available in all communities and can be taken in the requisite doses by practically all people, though I would not recommend it for general use for infants less than one year old.

The rationale of this procedure is the following: (1) Iodin possesses germicidal powers; (2) When Iodin is taken into the system in the form of its various salts, it is excreted in part through the structures of the respiratory tract; (3) The presumption is that grippe infections enter by way of the upper air passages; (4) The excreted Iodin, present in the juices of the respiratory tract, renders it an unfavorable soil for the implantation of germs, or if already implanted, for their propagation.

In view of the critical situation I have been urged to give this experience immediate general publicity and therefore I send this communication to your valued journal.

Yours truly,
SANFORD BLUM, M. D.

San Francisco, Cal.

Concerning Anesthetists.

The Rockefeller Institute for Medical Research, New York.
War Demonstration Hospital.

To the Editor:—A gradually increasing misconception of the Art of Anesthesia has led to a rather unique condition of affairs.

We find that nurses and other lay persons may, by the simple acquisition of a few rules, become anesthetists. Large institutions have adopted the nurse anesthetist upon grounds of economy, expediency and even sentimentality. It is argued that these workers can be employed at little expense, that the supply meets the demand and that the feminine element eliminates fear and works for smoothness during the induction of the anesthesia.

These institutions may employ lay persons to take their X-ray pictures and to make urinary, blood or sputum examinations, but does anyone dream of speaking of these workers as the hospital Roentgenologist or the attending Pathologist? They are employed as technicians. The nurse who administers an anesthetic is an anesthetic technician. She can never be more without a medical degree, for in order to understand the language of anesthesia one must have intimate acquaintance with anatomy, physiology, medicine, surgery, diagnosis, psychology and special branches.

The nurse who in discussion with a medical man attempts to defend a theory relating to anesthesia cannot fail to feel the presumption of it and, if graced with it, to see the absurdity of such a position. Yet it has actually come to pass that medical men have suffered themselves to be instructed by a nurse in the theory and practice of anesthesia.

In justice to an important branch of surgery and to our medical confreres who devote their training and their energy to its development, let us drop the term Anesthetist as applied to its non-medical workers and adopt the term Anesthetic Technician.

PALUEL J. FLAGG.

October 1, 1918.

County Societies

ALAMEDA COUNTY.

It was with genuine sorrow that the members of the Alameda County Medical Association, as well as the entire community, learned of the death of Dr. A. S. Kelly.

In the passing of Dr. Kelly there was taken from their midst a man, a friend, a citizen and a physician—as such he will be missed and mourned.

Dr. Kelly was a member of the County Medical Society, of which he was president in 1911; the California Medical Society, the American Medical Association, and the California Academy of Medicine. He was Professor of Operative Surgery in the Oakland College of Medicine and Surgery and was physician to the Alameda County Hospital, the Kings Daughters' Home, the Industrial Accident Comission and was an active worker in the Alameda County Anti-Tuberculosis Society. Formerly he was on the Medical Staff of St. Luke's Hospital, San Francisco.

His political career was limited to the Board of Education, of which he was a member since 1907, being reelected by an overwhelming vote. For three terms he held the presidency of that body. The City Council adopted resolutions expressing regret at the loss of an honored member of the city administration.

The physician's refusal to remain in bed and neglect urgent calls from patients is held by his medical attendants to have been largely responsible for his death.

LOS ANGELES COUNTY.

Medical Meeting on Influenza.

On October 14, Dr. Powers, chief of the health department, and the staff of the county hospital conducted a medical meeting on Spanish Influenza. Dr. Reves dwelt on Cutter's Mixed Respiratory Vaccine and said that out of 150 men vaccinated, none came down after 48 hours in camp. The polyvalent anti-pneumococcic serum was recommended in complications of lobar pneumonia..

Dr. Zeiler gave Pfeiffer's bacillus as the specific germ but the British authorities think other

bacteria are the cause. Film preparations were gram negative. Culturally, the germ was isolated.

Six cases of influenza on the U. S. S. Tennessee, died of pneumonia. The blood culture was sterile, the film preparation showed Pfeiffer's bacillus in pure culture. Culture and smear from dead pneumonic case, gave influenza bacillus.

In the east cultures are made from the bronchial secretions. The mouth is not affected. The micrococcus catarrhalis, the pneumococcus, the influenza bacillus, are rarely found in the mouth. Pathologically, it is a respiration infection. Blood cultures are always sterile. It is a local infection, due to toxemia, hyperemia, and congestion of the respiratory tract. There may be pneumonia, lobular patches: Immunity is transitory if present. The serum of convalescent cases having immune bodies, should be used in severe types for immunity.

Dr. Powers—Prime condition and temperance are no bars to the disease. These conditions may serve in recovery, but do not prevent contracting influenza. We may be immune, but repeated attacks are more fatal. Some epidemics are mild. Protect by not coming in contact with others. Keep clean. The infection is conveyed by personal contact, by coughing, sneezing and talking. Close, unventilated rooms are bad. Keep the air in motion. The first case should not be allowed to be transmitted. Many cases are so mild that they extend before you know it. Quarantine or isolation will not stop the spread. At first the cases may be violent and then get less so, and vice versa. Quarantine is to check the epidemic.

Lieutenant Langley, of the navy, spoke on the symptomatology of the disease from August 15 to the present time. There is headache, pain in joints and fever. Blood counts nearly all show leukopoenia. The onset is sudden, 4 to 5 hours. Chills and sweat, temperature 105°, sometimes normal. Coryza, photophobia, alumin in urine, constipation, epistaxis, probably toxæmia, gastritis may be present. Its course is from 2 to 5 days. Prophylaxis—Use Dobell's Solution for gargle, isolation, and mask.

Dr. Spaulding—Personal hygiene, cleanliness, quarantine, droplet infection, sterilization of the mess gear were considered, and that the disease is a hand-to-mouth contagion.

Dr. Kellogg—Spoke of the drop infection or mouth spread, of contamination of glasses and towels, of gauze mask to protect from infection. Some cities keep schools open—the teachers are to exclude any child that shows any sickness. There are 6,500 cases in California.

Dr. Barrow discussed the treatment. He said that our prophylaxis is deficient, that the mask does the neighbors a lot of good. He urged keeping hands off and down and washing them before touching patient. The nose and throat throws off much if you get into the air and sunshine. The germ lies deeper than you can reach with a gargle. Go to bed and keep warm. For fever, the aspirin affects neighbors' hearts. After taking quinine, the patient sweats, sits up and takes pneumonia. Aspirin, quinine and camphor together is all right, caffeine will carry the patient through. Three to five days after the fever should be spent in bed. In broncho-pneumonia and edema of the lungs watch for bloody sputum. If the latter be present there is no edema. He spoke of using atropine hypodermically, and of digitalis. One dose of heroin may save a life, the second may endanger it. Be careful of diagnosing middle ear trouble, tender mastoid, gastro-intestinal conditions, vomiting, diarrhea, etc. Diarrhea may be controlled by boiled milk. Milk and eggs is all the food these cases need. Acidosis is combated by Sodium Carbonate. For cough you may give Codein ¼ grain, Ammonium Chloride 1 to 3 grains, syrup of Tolu, and Glycyrrhiza; hot lemonade, cold makes the cough worse. The disease may last 10 days or three weeks. In California the prognosis is good. Have the patient stay in bed till you decide that he may get up.

County Medical Meeting of November 2.

At the Los Angeles City Board of Health in the Civic Center building, was called to order by the president, Dr. Wm. Duffield. Dr. Powers, chief health officer, furnished the influenza masks for the occasion.

Dr. Duffield remarked that this conference was called together by phone in order to have Dr. Woods Hutchinson, who was in town, speak as an expert on the "flu" epidemic. "A goodly number are present, some are sick and some are busy. I will call on Dr. Powers to begin the subject."

Dr. Powers—We have had grip for a long time. This epidemic started about fifteen days ago at San Pedro, where a crew came ashore from San Francisco, spreading this influenza. Visitors from New Mexico and Arizona also brought it early in October. Not many cases were reported until the State Board made the report of influenza obligatory. All cases are not reported because some have no physicians attending. The mayor appointed a committee from the navy, army and aviation field to act as an advisory committee to the Board of Health. Rules were formulated. It was thought that wearing masks is beneficial when around cases. In our literature we urged the wearing of masks under certain conditions but the last few days the committee thought they should be worn generally. The death rate is higher at different times. On Sundays, for instance, there are no funerals and there is no mail, so the Monday's report includes that of Sunday. Our death rate is not as high as in the east. For Monday and Sunday there were 1,342 deaths. Last Wednesday alone there were 1,000. There were 547 cases reported today, of which 60 died, eleven of influenza, twenty-six of pneumonic complications, eleven of lobar and three of bronchial pneumonia. There were 900 deaths altogether.

Dr. Woods Hutchinson, of Redlands, complimented the health department and advisory committee. "Six weeks ago I went to Boston, where we doctors studied the disease and made a report to the Medical Reserve corps.

"In Boston the epidemic is terrific. I stopped in big cities to study the disease. Experts on the 'flu' declare it is the same old Pfeiffer Bacillus. There have been five epidemics: one during the Napoleonic war, others started in Asia in 1830, '60, '99 and again sixty years later, usually every thirty years. Most of us have acquired immunity.

"The present epidemic is called the Spanish Influenza. Belligerent censors denied its presence whereas neutral Spain had nothing to hide. There were 200,000 cases in the German army, which accounted for three months of inactivity after the Russian collapse.

"In mild cases the patient may not go to bed. When it was first brought to camps there were only 200 deaths out of 20,000 in three weeks. However, there were a thousand deaths out of 14,500 cases. Young men of military age and four times more men than women have it. Two-thirds of the cases are between 20 and 40 years. The same type increases in virulency. It spreads by attacking man, then child, then old women and young women.

"Eighteen thousand deaths took place in the cantonments; more than were killed in the battle-line. In Boston, influenza killed 4,000 in three weeks; 125,000 individuals were affected. Every place will have about the same death rate.

"The mask is the only thing to stop its spread. One out of ten is susceptible. The disease has not changed. Out of a population of 100,000,000 there are 300 to 400,000 deaths. It is a Pfeiffer Bacillus infection. I have called it 'Influenza Pneumonitis.' If the patient dies the second day you will find no pneumococcus. If

the respiration rate is 35, look out for acute edema. Such patients virtually drown in their own fluid. Eighty-one per cent. of cases have the influenza bacillus, so that anti-pneumococcic serum is not indicated.

"The influenza bacillus lives only 5 or 6 minutes outside of the body, therefore sterilization is unnecessary after 3 or 4 hours. Wash the mask at night and hang it over the electric light to dry. Infection takes place through the nose, the stomach can digest the bacillus. When there is cyanosis of lips and finger-nails, the patient has only one chance in six for recovery.

"An intern at the Los Angeles County hospital had infected 96 nurses. There were 2,004 cases reported in San Francisco. Masks were worn from October 20. On the 26th the difference was noticed by having only 1,600 reports. The 27th, 1,400; October 28, 1,200; October 29, 1,000; so from 2,000 cases, the disease was reduced to 532 cases per day and deaths in proportion.

"Leary's Vaccine, made by Dr. Timothy Leary, of Tuft's Medical College, has given good results. It has been Dr. Leary's study for fifteen years. In Boston it was tried on internes and nurses, 6,000 of them. Thirty per cent. had come down before. Of 6,000 vaccinated, 92 developed the disease but none had pneumonia and none died. The injection is made in the arm. The Boston City Board of Health and the committee of investigation advised the production of the vaccine for free distribution. The germs are only in the lungs, not in the blood. In the Boston hospital, mortality fell from 33% to 5% with its use."

Dr. Zeiler was asked by Dr. Duffield several times to give his views as an expert bacteriologist. Dr. Zeiler doubted the use of vaccines, that are not made of the specific germs involved, and offered to manufacture a big lot of Leary's Vaccine at cost to the Los Angeles Board of Health for free distribution, which offer Dr. Powers accepted.

Dr. Barrow cautioned not to expose the patients to drafts or breezes, that they should be well covered, kept warm and moist and not given cold alcoholic rubs. The patient should not be given cold water to drink lest he vomit. Aspirin and other salicylates hurt the heart. He cautioned about observing proper care in wearing masks or they might become a source of danger.

An attorney-at-law, as a friend of the medical profession, pleasingly spoke about urging the use of the mask but not to arouse opposition of a certain element by making the use of the mask obligatory.

Dr. Cole's committee, in conference with Chief Butler of the Police Department, reported that the latter thinks it difficult to enforce.

Dr. Powers was thought to have accomplished the same result that San Francisco effected with the mask, by preventing the gathering of people.

Dr. Palmer, of Hollywood, reported 70 cases treated by Mulford's sero-bacterin mixed and used the same for prophylaxis with good results.

Dr. Jacobs used the composite vaccine of Mulford by giving four minims for the first dose, eight minims for the second. There was but little local and no systemic reaction.

Dr. Hutchinson stated that Mulford makes the Leary vaccine and that Dr. Powers has been given from three to four thousand doses for distribution.

Dr. Newton spoke of the volue of the mask during the bubonic plague in Asia, and that it also prevented cholera.

Dr. Hutchinson concluded that there would be no influenza in ten days if we wore masks.

Dr. Duffield adjourned by saying, "Let us urge wearing them."

Personal.

Three medical officers, including Dr. Geo. H. Kress, seventeen nurses and twenty orderlies contracted influenza during the establishment of a hospital for the U. S. C. Students' Army Training camp. In a total of 175 cases, there was one death.

Dr. Earl B. Sweet left October 17 to become a captain at the Base hospital, Camp Pike, Little Rock, Ark.

Dr. Ernest Crutcher has been notified of his appointment as temporary assistant surgeon in the U. S. Public Health Service and was ordered to proceed to Thermal, Riverside county, to assist the physicians in that locality in relieving the conditions caused by the influenza epidemic in the neighborhood of Indio, Mecca, Coachella and Thermal, where many of the resident physicians have caught the disease.

Doctors Leave for War.

Dr. W. Hume Roberts of Pasadena entered war service a year ago and rose to the rank of major in command of a base hospital at Camp Lewis.

Dr. Thomas J. Orbison of Los Angeles, who is associated with Dr. Roberts, is now a captain.

Major Roberts' unit has been notified to prepare to leave for foreign service.

From Los Angeles and neighborhood over three hundred and fifty doctors have joined the service and are in home camps, on the sea, or "over there."

Local Surgeons Appointed.

Drs. John V. Barrow, Charles W. Bryson, Geo. H. Kress and Walter Wessels have been appointed surgeons of the University of Southern California Army Training camp.

Dr. W. G. Marxmiller has been commissioned a captain in the Medical Corps. He entered this service fourteen months ago as first lieutenant, and is stationed with Base Hospital No. 34.

Dr. Maurice M. Armstrong is preparing to report to Camp Lewis immediately, having been commissioned captain in the Medical Corps.

Dr. J. A. McNaughton of Los Angeles, recently commissioned a captain in the Army Medical Corps, departed November 5 for Camp Cody to report for duty.

Dr. Edward J. Cook has been commissioned as captain in the Army Medical Corps and left for Camp Cody, N. M., November 5.

Dr. A. Bowers of Soldiers' Home Hospital staff was called, October 28, to San Francisco to report for duty with the Medical Corps. He is the eighth physician to be called from this home.

Dr. E. E. Roberts, former president of the Sawtelle Chamber of Commerce, reported for duty October 31 at Camp Kearny. He was a regular army surgeon for twelve years. His rank is that of captain.

Supervisors Fight Strike of Student Nurses.

One hundred and twenty-six student nurses at the County Hospital who protested against the admission of negro girls to the ranks will be fought to a conclusion by the county.

"There are more than 1,000 patients in the hospital at present and we are short of nurses as it is, about twenty being on the sick list. An appeal, bringing out this situation, will be made to the students who have tendered their resignations."

Convalescent Home.

The City Council appropriated $10,450 to equip and operate a convalescent home for influenza patients in the Mt. Washington Hotel Building. Health Officer L. M. Powers suggested that the offer of the Los Angeles Settlement House Association to pay the rent of $200 a month on the building, be accepted.

Drug Men Fight Sunday Closing.

Members of the Los Angeles Retail Druggists' Association oppose the proposed Sunday closing law because they cannot comply with the rule and satisfy the public.

Local Draft Boards Need Doctors.

Physicians nad surgeons who can spare time to serve on the local draft boards are requested to communicate with Dr. William Duffield, 516 Auditorium Bldg., president of the Los Angeles Medical Association.

Notices

CALIFORNIA STATE CIVIL SERVICE EXAMINATION.

Director, Bureau of Child Hygiene, State Board of Health.

DATE OF EXAMINATION, December 14, 1918. Last date for filing applications in Sacramento, December 7, 1918.

The California State Civil Service Commission announces an examination for DIRECTOR, BUREAU OF CHILD HYGIENE, STATE BOARD OF HEALTH, to be held in Sacramento, San Francisco, and Los Angeles, December 14, 1918. The salary is $3,000 per year.

The duties of the position are the administration of the affairs of this Bureau, which includes within its scope of activities the organization of local agencies to further the cause of child hygiene; the establishment of baby clinics; the improvement of birth registration; medical inspection of school children; the preparation and placing of educational exhibits; advancement of community recognition of the need for public health nursing services; and the carrying on of prenatal instruction and follow-up work with the aid of field nurses working under the Bureau. In addition to these duties, the director will have charge of the writing and compiling of publications on the general subject of child hygiene.

Candidates must be graduates of a reputable medical school recognized by the California State Board of Medical Examiners; must have a knowledge of modern public health principles; and must have had two years' experience as holder of a full-time public health position, of which one year must have been in an administrative capacity.

The examination is open to all American citizens residing in California who are not over forty-five years of age on the date of the examination, and who meet the above requirements.

The subjects for the examination will be as follows:

	Relative weight.
1. **Written Examination**..... This portion of the examination will cover the subjects of general hygiene and sanitation, school sanitation and hygiene, community cooperative child care, prenatal work, children's diseases, infant feeding, preventable defects and mental hygiene.	50
2. **Education, Experience and Fitness**..... Candidates who secure an average of at least 70% in the written test will be given an oral interview before a special board of examiners designated for the purpose by the Civil Service Commission, at which time they will be rated upon their education, experience and fitness for State service.	50
Total	100

Candidates must secure a rating of at least 70% in the oral interview in order to pas the examination.

Six hours will be allowed for the written portion of the examination, from 9 A. M. to 12 M. and from 1 to 4 P. M.

Persons desiring to enter this examination may secure applieation blanks from the State Civil Service Commission at either of the following offices: Room 331, Forum Building, Sacramento; Room 1007, Hall of Records, Los Angeles; or from the offices of the State Free Employment Bureau in San Francisco, Oakland, San Jose, Fresno and Stockton. Complete applications must be filed with the State Civil Service Commission, FORUM BLDG., SACRAMENTO, on or before December 7, 1918.

STATE CIVIL SERVICE COMMISSION.

State Board of Medical Examiners

REVIEW OF ACTIVITIES.

The annual meeting of the Board of Medical Examiners was held in the State Capitol, Sacramento, Cal., October 21st to 24th inclusive. Present, Drs. Alderson, Campbell, Molony, Phillips, Pinkham, Sisson and Tasker. An examination of applicants for all classes of certificates was conducted. Forty-nine applications for written examination were filed and thirty-six applicants appeared, of which ten wrote the examination in the Japanese language, the questions being first translated into Japanese. As usual, the answers to the questions written in Japanese by these applicants will be translated into the English language by an interpreter unknown to the applicants. Each applicant writing in a foreign language is called upon to deposit a translation fee of $100 in addition to the regular fee of $25 required of all applicants for written examination. The cost of conducting the examination in a foreign language, interpreters' fees and translator fee, is deducted from the deposit above noted and the balanee is refunded (pro rata) to the applicants. Owing to the apparent disparity between the official translation and a subsequent translation of papers written at the June 1918 examination, the Board determined that the entire set should be again translated and re-submitted to the respective examiners for their consideration. A thorough investigation of the suspected connivance between the translator, Mr. Nakayama, and certain applicants, was made with the result that on November 9th Mr. Nakayama was arrested at 105 East Third street, Los Angeles, by representatives of the Board of Medical Examiners, and it is charged that he "charged the candidates from $1000 to $5000" for supplying correct answers to the various questions while supposedly translating their papers from Japanese to English.

Six specific charges of fraud are laid to Nakayama in which physicians in San Francisco, Stockton and Los Angeles figured. The specific individuals mentioned are Rinehei Haruki, 1204 Fourth street, Sacramento; Hayashi; Buichi Nakahara, 144 Hewitt street, Los Angeles; Masao Ochiai, 1672 Post street, San Francisco; Matsuye Suzuki, Vacaville (deceased); Etsuzo Watanabe, 1221 Fourth street, Sacramento.

Ninety-one reciprocity applications were filed for the October meeting and in addition thereto, further consideration was given applications pending as incomplete from the prior meeting. Nineteen direct reciprocity certificates have been issued to date pursuant to the action of the Board at the last meeting and twelve oral examiners having passed the examination, have each been issued a reciprocity certificate. On receipt of supplemental data, reciprocity certificates will be issued to approximately forty-five additional applicants. The certificates already issued in the number above noted

were based on certificates issued by the following states:

Arizona	'97 Oral
Arkansas	'17 Direct (2)
Illinois	'10 Direct
Illinois	'16 Direct
Illinois	'93 Oral
Illinois	'01 Oral
Indiana	'97 Oral
Iowa	'16 Direct
Iowa	'05 Direct
Maryland	'06 Direct
Massachusetts	'07 Oral
Michigan	'05 Oral
Missouri	'97 Oral
Missouri	'95 Oral
Missouri	'16 Direct
Missouri	'04 Direct
Nebraska	'14 Direct
New Hampshire	'05 Direct
New York	'04 Direct
New York	'80 Oral
New York	'97 Oral
Ohio	'17 Direct
Ohio	'96 Oral
Ohio	'05 Oral
Pennsylvania	'97 Oral
South Dakota	'07 Direct
Vermont	'05 Oral
Utah	'02 Direct
Virginia	'09 Direct
Wisconsin	'98 Oral
Arizona	'97 Oral

Perchance of passing interest may be the case of one reciprocity applicant from Georgia who prior to filing an application with the California Board, made an affidavit as a part of his application to the Colorado Board that he was licensed in California and thereafter requested that his application filed with the Colorado Board be withdrawn. Subsequently he applied for a reciprocity certificate in California, making affidavit thereon that he was licensed in Colorado. Inasmuch as he does not hold a certificate issued by either State, he has uttered a false affidavit in each instance.

The annual election of officers resulted in the re-election of Dr. P. T. Phillips, Santa Cruz, president; Dr. Robt. E. Campbell, Los Angeles, vice-president; and Dr. Charles B. Pinkham re-elected, secretary-treasurer for the year 1918-1919. No other meetings of the Board will be held during 1918. The schedule for 1919 provides for a meeting in Los Angeles March 17th to 20th inclusive; in San Francisco, June 23d to 27th inclusive and the annual meeting at Sacramento, October 20th to 24th inclusive.

The Board acted favorably on the petition for the restoration of the license of Charles Rinhold Baker whose license was revoked in 1914. The petition of Dr. Baker was supported by commendatory letters from Dr. George H. Richardson, Red Cross; from recent employers of Dr. Baker, etc. Dr. C. R. Baker reports that he is now in the Public Health Service located at Le Moine endeavoring to control the influenza epidemic.

Directory.

It was determined that future editions of the Directory should be arranged alphabetically by counties to meet the popular demand for such an arrangement, thus making it possible to determine what licentiates are practicing in a specific locality. Copies of the Directory and its supplement will be distributed gratis to all District and County Health Officers, County Clerks, District Attorneys, as well as Chiefs of Police, thus affording a wider field for the determination of those who may be practicing in a specific locality without legal authority.

Annual Tax.

Many States are incorporating in their Medical Practice Act a provision for the imposition of an annual tax or registration fee, as such a regulation provides a method whereby the Board is kept in closer touch with its licentiates; affords a method of discovering fraud in the impersonating of a licensed physician by one not so licensed and affords an added check on violators of the Medical Act. Some time ago the Board arrested in Sacramento a Japanese practicing under the license of a Japanese resident of Los Angeles, who paid to the Los Angeles licentiate a monthly rental for the use of the certificate in Sacramento.

A standardized plan of handling the 1919 tax was adopted as suggested by the Secretary, and if the individual licentiate will follow the directions printed on the forms received by him, the 1919 tax will be expeditiously handled and the publication of the Directory be advanced over the date of that of 1918. Accompanying the notice of the annual tax will be a supplement together with a list of licentiates now in Government service, and we anticipate the receipt of a considerable amount of information of value in perfecting this list which will later prove of considerable historic value.

Those paying the tax of 1919 will be furnished with card numbered both in series and by the tax receipt number, on which the individual licentiate is requested to write his name. This card will be the receipt for payment of the fee and should be carried by each licentiate.

Legal Hearings.

Legal hearings scheduled for the meeting were:

Card, W. S., M. D., San Francisco—Charged with violating Subdivision 1, Section 14 of the Medical Practice Act. Continued to the next regular meeting.

Duncan, Franklin T., M. D., San Francisco—Charged with violating Subdivision 1, Section 14 of the Medical Practice Act. Guilty. Judgment suspended until June 1919 meeting.

Calhoun, Jas. B., M. D., San Francisco—Charged with violating Subdivision 1, Section 14, Medical Practice Act. Deferred to February 1919 meeting, Los Angeles, owing to illness of respondent.

Ryberg, Harry (Chiropodist), San Francisco—Charged with violating Subdivision 3, Section 14. Guilty. Judgment suspended until June 1919 meeting.

Davis, C. H. A., D. O., San Rafael—Charged with violating Section 14. Charge dismissed.

Hickok, Galen R., San Francisco—Charged with violating Subdivisions 1, 6 and 8 of Section 14. Service of complaint and citation could not be made as respondent could not be located. Dismissed.

Kroetz, Mary, M. D., San Francisco—Request for restoration of license revoked at June 1918 meeting.

Deferred to February 1919 meeting in view of a restraining order and a writ of review pending.

Kleeman, Geo. E., M. D., Oakland—Moved by Dr. Campbell, seconded by Dr. Alderson, that Kleeman case be continued to June 1919 meeting.

Gaynor, Katherine, Naturopath, San Francisco—Charge dismissed.

Harris, Donald, M. D., San Francisco—Continued to June 1919 meeting.

Scott, C. M., M. D., San Jose—Dismissed.

Committee Reports.

The various committees of the Board submitted their reports.

The College Investigation Committee reported that the College of Physicians and Surgeons, San Francisco, and the Oakland Medical College had suspended teaching during the period of the war, their students enrolling in the College of Physicians and Surgeons, Medical Department, University of Southern California, Los Angeles; that the Stanford Medical School, University of California Medical School; the College of Physicians and Surgeons, Medical Department, University of Southern California, Los Angeles, and the College of Medical Evangelists, Loma Linda, were approved as qualifying applicants for a Physicians and Surgeons certificate and the College of Osteopathic Physicians and Surgeons, Los Angeles, approved as qualifying applicants for a Drugless Practitioner certificate.

Report of Legal Department.

Report of Legal Department (Northern District) of cases pending and arrests made subsequent to the June meeting to date.

Cases Reported Pending June 21, 1918.

Name.	Disposition.	Remarks
Josse, Madam	Guilty	2 years probation
Fan Yet Cho (San Sing)	Guilty	$250 fine
Fong Wan	Dismissed	Witnesses disappeared

Cases Reported Pending For Trial June 21, 1918—3

Guilty	2
Dismissed	1
Total	3

Arrests Made Subsequent to June 21, 1918.

Name	Disposition	Remarks
Hegyessy, J., D. O., San Francisco	Guilty	2 years probation
Van Cleave Oakland	Guilty	6 months probation
Waites, S. W. Oakland	Guilty	1 year probation

Arrests made since June 21, 1918		3
Guilty	3	3

RECAPITULATION.

Cases pending	3	
Arrests made	3	
Dismissed		1
Guilty		5
	6	6

There has been reported to me through the Investigating Department the following cases pending in outside counties:

Sept. Aug. 16		
Chew Yuen	Red Bluff	Pending
Walter C. Hoyt	Red Bluff	Dismissed
T. Wah. Hing	Sacramento	Pending
T. Shiba	Sacramento	Pending
K. Naido	Sacramento	Pending
C. M. Jones, Chiropractor	Sacramento	Pending
Yit Wah	Chico	Pending
Mabel Kellom	Chico	Pending
Julian Ferant	Sacramento	Pending
W. C. Williams, D. O.	Yreka	Pending
Chiss Kuen	Colusa	Pending

Respectfully,

LOUIS H. WARD.

Los Angeles, Cal., Oct. 17, 1918.

Report of Legal Department for Southern California for the period June 19, 1918, to October 15, 1918, inclusive:

Cases for Violation of State Medical Practice Act, pending June 19, 1918.

Name of Case	Disposition
Diamond, J. C. (Long Beach)	Guilty. Probation two years
Domingues, Armando (Chino)	Pending. Defendant not apprehended
Gilkerson, J. K.	Pending. Off Calendar
Howell, S. J.	Dismissed. War service overseas
Webb, E. T.	Pending. Off Calendar
Wing, Tom How	Pending

Cases initiated between June 19 and October 15, 1918, inclusive.

Name of Case	Date Initiated	Disposition
Aycock, Charles F.	10/7/18	Pending
Chan, G. S.	10/14/18	Pending
Chan, H. T.	10/11/18	Guilty. $100 or 100 days. Fine paid.
Ching, H.	10/15/18	Pending
Ellsworth, J. E.	8/19/18	Guilty. Probation two years.
Garza, Joaquinna	10/15/18	Guilty. $500 or 180 days. Suspended two years.
Hook, Charlie	10/11/18	Pending
Lanterman, Roy S.	10/15/18	Pending
Leung, T.	10/14/18	Pending
Moralles, Senora	10/15/18	Pending. Defendant not apprehended.
Murasse, M.	8/12/18	Guilty. $100 or 100 days. Fine paid.
Platt, Burton C. (Monrovia)	9/13/18	Dismissed. Insufficient evidence.
Tom She Bin	8/13/18	Pending
Tom She Bin	9/24/18	Pending
Tuey, K. Y.	9/30/18	Guilty. $200 or 180 days. Fine paid.
Webb, E. T.	10/14/18	Guilty. $100 or 100 days. Fine paid.
Wolf, Wm.	10/1/18	Guilty. $500 or 100 days. Suspended two years.

FEDERAL COURT.

Using U. S. Mail in furtherance of a scheme to defraud, initiated after June 19, 1918.

Name of Case	Disposition.
Silverman, Herman	Pending.
Young, Klyde H.	Pending.

APPEALS PENDING.

Supreme Court, State of California.

Name of Case	Disposition.
Suckow, John K. vs. Board	Pending.

Superior Court.

Writs.

Name of Case		Disposition.
Jacobson, Moses	Writ of Review	Pending

APPEALS PENDING.

Superior Court, State of California, County of Los Angeles.

Name of Case	Disposition.
Batdorf, J. W.	Pending.
Foote, A. M.	Pending.
Hiroto, H.	Pending.
Hook, Charlie	Pending.
Leung, T.	Pending.

Respectfully submitted.

H. J. CASTELLAW,
Special Agent.

Change of Name.

The following have filed an affidavit noting change of name:

Formerly—	Formerly—
Miller, Clara Macfarlane	Cheney, Florence V. Wall
Winslow, Josephine Barbat	Mell, Ellen F. McCarthy
Morton, Julian L. Leeds	Rittenhouse, Pearl Shrode
Peters, Helga Skyberg	Kratz, Esther Cumberland
Edge, Harriet L. Chamberlain	Moore, Gertrude K. Arnold
Mayne, Lucy S. Cushman	Feather, Harriett Rice
Volkhardt, Vida Redington	Perea, Laure Ducote
Phinney, Myrtle Hemstreet	Ford, Maude Abrams
Henery, Ada B. Keller	Wilson, Minnie J. Luttge
Price, Olive Moore	McAulay, Sarah J. Hatton
Meads, Romilda Paroni	Rinehart, Clara M. Stoddard
Rundall, Chloe F. Maxfield	Zumwalt, Frances P. Frank
Aldrich, Carra Schofield	Carlton, Albert Cohn
Culver, Blanche Van Heusen	De Chene, Anna Bass
Rittenhouse, Pearl Shrode	Brazelton, Clara Holmes
Conrad, Agnes M. Eigholz	de Giannini, Martha M. G. Thorwick
Ruddock, Agnes Scholl	Thoren, Mildred E. Fosdick
	Holden, N. Catherine Ernst
	Basor, Jane Slosson

MEDICAL TAX DUE.

Attention of all licentiates to practice any system of the healing art in the State of California is drawn to the 1919 tax of $2.00 payable to the Board of Medical Examiners on or before January 1st of 1919, which becomes delinquent sixty days thereafter and the Medical Practice Act provides a penalty of $10.00 for reinstatement of all delinquent certificates.

Kindly forward all fees to the Board of Medical Examiners, State Capitol, Sacramento, Cal.

Stanford Polyclinic Colloquia will be resumed in January, 1919.

STATE BOARD OF MEDICAL EXAMINERS.

Examination Held Oct. 22 and 23, 1918.

BACTERIOLOGY AND PATHOLOGY

For Physician and Surgeon Applicants.

DAIN L. TASKER, D. O.

(Answer Ten Questions Only.)

1. Describe Bacillus Influenza.
2. Give ten different varieties of pathogenic bacteria with their microscopical characteristics.
3. Discuss the production of (a) active and (b) passive immunity.
4. What is a vaccine? How is it made?
5. Describe method of examining secretion from a chancre for treponema pallidum.
6. Mention five bacteria which grow best on blood-streaked agar.
7. Discuss adenomata and indicate their usual sites.
8. Discuss emboli and state under what conditions they are apt to occur.
9. Discuss bronchiectasis.
10. Discuss the pathology in acromegaly.
11. Describe the blood picture in pernicious anemia.
12. In what different ways may arterio sclerosis cause death?

SURGERY

For Physicians and Surgeons.

WM. R. MOLONY, M. D.

1. Ununited fracture of Femur of ten weeks' duration two inches below great trochanter, in a woman 60 years of age. Give pathology.
2. In question one give technique of operative treatment and post-operative care.
3. Discuss movable kidney.
4. Give technique of an acceptable operation for the fixation of a movable kidney.
5. Give technique of suprapubie prostatectomy including pre-operative measures and post-operative care.
6. Discuss surgical treatment of empyaema.
7. Give indications for and technique of skin grafting. Give three useful methods.
8. Discuss nerve suture.
9. Give pathology of a bunion. Give technique of its surgical relief and after care.
10. Give pathology of hemorrhoids. Give two acceptable methods for cure by surgery.
11. Give post-operative management of a hemophiliac (bleeder).
12. Discuss post-operative ileus.

(You have two hours for this examination. Answer ten questions. Divide your time into ten periods so you may have sufficient time for the last questions.)

GENERAL MEDICINE

For Physicians and Surgeons—Applicants.

H. E. ALDERSON, M. D., San Francisco, Cal.

October 22, 1918.

(Answer Ten Questions Only.)

1. A child three years old has urticaria. Discuss probable etiology and the procedure necessary to determine the same.
2. A woman 20 years of age shows nervousness, loss of weight, irregular menstruation, slight cough, increased sweating and tachycardia. Discuss the diagnosis.
3. What significance has a "plus minus" Wassermann? Discuss fully.
4. Discuss the main complications to be feared the first two years in the course of lues and means of recognizing the same.
5. What are the causes of "Salvarsan deaths"? Of thrombophlebitis after Salvarsan injection?
6. A man 18 years of age has nodular swelling on legs anteriorly, fever, generalized pains, irregular heart and a positive Wassermann. Discuss the differential diagnosis and treatment (briefly).
7. A man 30 years of age has bradycardia, evening temperature, constipation, occipital aching and epistaxia. Discuss the diagnosis and treatment (briefly).
8. A patient presents a chronic relapsing, inflamed sensitive buccal mucosa, asthenia, pale frothy stools, and more or less diarrhea. Discuss probable diagnosis and prognosis.
9. Discuss the etiology and prognosis of pruritus ani.
10. Differentiate between Bright's disease and myxoedema, and discuss etiology.
11. A young woman has rapidly developing marked œdema of one eyelid, nausea, vomiting and severe colic. Discuss diagnosis and prognosis.
12. A young child has sudden vomiting, high temperature, furred tongue and flushed face. Discuss possible diagnosis.

CHEMISTRY AND TOXICOLOGY.

For Physician and Surgeon Applicants.

DAIN L. TASKER, D. O.

(Answer ten questions only.)

1. Define organic chemistry.
2. Given dried kelp prepare resublimed iodin.
3. Give formula of formaldehyde and one method of its preparation.
4. Name four coal tar products used in medicine.
5. In what ways through blood and urine chemistry may acidosis be determined?
6. Give formula for urea and one method for its quantitative estimation.
7. Describe in detail Marsh's test for arsenic.
8. Give clinical picture of poisoning by $HgCl_2$ and describe treatment.
9. What poisons may cause sudden death?
10. State the toxicological effect of carbolic acid and the antidotal measures to be employed.
11. What is indican? Discuss the significance of its appearance in the urine and give test.
12. Give the chemical and physiological treatment of phosphorus poisoning.

ANATOMY AND HISTOLOGY.

For Physician and Surgeon Applicants.

H. E. ALDERSON, M. D.

October 23, 1918.

(Answer ten questions only.)

1. Discuss anatomy of the superficial lumph glands usually involved in the secondary phase of lues.
2. Describe briefly the gross structure of the pancreas and its topographical anatomy.
3. Discuss the structure and relations of the various tissues penetrated in making a lumbar puncture.
4. Describe fully the histology of the skin of the ala nasi and compare with that of the eyelid.
5. Discuss the attachments and action of the pectoralis minor.
6. Discuss briefly the contents of the axilla and their relations.
7. Describe briefly the portal circulation.

8. Describe the dorsalis pedis artery and its relations.
9. Name from without inward, the coverings of the testicle.
10. Describe the microscopic structure of the ovary.
11. Describe fully the frontal sinus.
12. Briefly describe the heart and its topographical anatomy.

ANATOMY AND PHYSIOLOGY

For Midwives.

1. Describe briefly the gross anatomy of the uterus.
2. What is corpus luteum?
3. Discuss the functions of the placenta.
4. What is the vernix caseosa?
5. Discuss ovulation and menstruation.
6. Describe briefly the human embryo of two months.
7. Discuss lactation.
8. Describe briefly the rectum.
9. Compare the female and the male bony pelvis.
10. Discuss the functions of the Fallopian tubes.
11. What is milk leg?
12. Describe briefly the umbilical cord.

MATERIA MEDICA, THERAPEUTICS, PHARMACOLOGY AND PRESCRIPTION WRITING.

For Physician and Surgeon Applicants.

P. T. PHILLIPS, M. D.

(Answer ten questions only.)

1. What is incompatibility in medicine and what are the different kinds of incompatibles. Give examples.
2. Outline the treatment of a typical case of "Spanish Influenza" in a young adult. Write prescriptions for all drugs used.
3. Discuss briefly the indications and contra-indications for the use of digitalis in affections of the heart.
4. Describe pituitary extract and discuss briefly its uses and abuses.
5. Describe origin, physiological action, and give dose of salicylic acid.
6. Why is adrenalin used in solutions of novocaine for local anæsthesia?
7. Give physiological effects, therapeutics application and mode of administration of oxygen.
8. Name drugs which administered to the mother produce a therapeutical action in the nursing child. What substances increase the flow of milk and what decrease it?
9. What is Dichloramine T? Describe its methods of application and its effect in infections.
10. Give treatment with prescription (written without abbreviation), for acute articular rheumatism.
11. Outline in detail the non-operative treatment of acute Cholecystitis.
12. Discuss psycho-therapy, its relation to and its uses in the modern practice of medicine.

PHYSIOLOGY.

Physician and Surgeon.

ERNEST SISSON, D. O.

October 23, 1918.

(Answer ten questions only.)

1. Discuss the retina and its physiological properties.
2. Discuss the physiology of the blood leucocytes.
3. Describe general physiological conditions influencing blood pressure and blood velocity.
4. Discuss the contraction wave of the heart.
5. Discuss vaso-motor regulation and explain its importance in relation to function of organs, giving three examples.
6. What is intracranial pressure? Discuss the causes and effects of variations in this pressure.
7. Discuss the negative pressure prevailing in the thoracic cavity. Explain what influence it has on the organs in the mediastinal space.
8. Describe how the respiratory reflexes are protective, give examples and trace the reflex.
9. Discuss the events that occur during single cardiac cycle beginning with the closure of the semilunar valves.
10. What relation should the quantity of vegetable food, including starch and sugar, bear to animal food consumed in 24 hours?
11. Describe myenteric reflex or the law of the intestines.
12. Describe the nervous mechanism of vomiting.

HYGIENE AND SANITATION.

For Midwives.

ERNEST SISSON, D. O.

(Answer ten questions only.)

1. Describe correct preparation of room and bed previous to time of expected delivery.
2. How can you distinguish the difference between arterial and venous hemorrhage from a limb.
3. How would you control each hemorrhage mentioned in question No. 2?
4. Describe the preparation and care of cows' milk for a young infant.
5. What points should be considered in buying green vegetables and fruits?
6. How may a child under one year of age be exercised?
7. How may bed clothing be disinfected?
8. Mention a safe chemical disinfectant and two which should be used with the greatest care.
9. Give a simple method of ventilating a sick room without a draft.
10. Describe the advantages in wearing an influenza mask.
11. What are some of the reasons for recording all births and deaths?
12. Why should all contagious diseases be reported to the health department?

HYGIENE AND SANITATION.

For Physician and Surgeon Applicants.

ERNEST SISSON, D. O.

October 23, 1918.

(Answer ten questions only.)

1. Discuss the life cycle of the hookworm and methods of preventing its spread.
2. Discuss the importance of medical inspection of public school children.
3. Discuss the benefits to be secured as a result of proper recording of all transmissible disease.
4. Discuss the advantages and disadvantages of the gauze mask method of preventing the transmission of respiratory infections.
5. Give in detail what is, to your mind, the best method of resuscitating a drowned person.
6. Discuss three important factors to be considered in proper ventilation.
7. Outline prevention, cure and treatment of influenza in a military camp.
8. Outline the essential features to be considered in the construction of quarters for tubercular patients in a county hospital.
9. Outline an inspection of a public meat market and suggest features in conduct of same.
10. Discuss venereal prophylaxis from the standpoint of the army and the public.
11. What protozone diseases may be controlled by public health measures?
12. Discuss the principles involved in septic tank method of sewage disposal.

STATE BOARD OF HEALTH.

To Local Health Officers:

To aid you still further in the perplexing problems arising by reason of the appearance of Spanish influenza, you are advised to handle the matter of quarantine as a simple isolation and not of complete quarantine.

In other words, infected individuals should be required to remain at their homes and if possible in a separate room from the rest of the family, and the family should be instructed to avoid unnecessarily close contact with the patient and to be particularly careful to guard their faces with a clean handkerchief or gauze mask when in immediate association with the patient.

Placarding of the house is not necessary and patients may be released within a reasonable period after subsidence of temperature, symptoms and cessation of discharges from the nose. An arbitrary isolation period has not been established but you are empowered whenever you feel that cases are being released too early to impose a detention period of ten days.

It is very important that school teachers be instructed to exclude immediately all children showing signs of acute cold or the characteristic symptoms of fever and aching of the limbs. If this is carried out theer will, in the vast majority of cases, be no necessity for closing the schools. A much more valuable measure than closing the schools would be the closing of moving picture shows and this is advised when the epidemic exhibits a tendency to spread rapidly, and involve a large number of persons.

In the smaller communities particularly, it is suggested that the health officer form a committee of interested citizens who will, as temporary deputy health officers, assist him in sending to their homes persons found associating with the public, who are plainly influenza victims.

Deaths

Beasley, S. O., a graduate of Cooper Medical College, San Francisco, 1897; licensed in California, 1898; was killed in France, October 14, 1918; was a member of the Medical Society, State of California.

Breitling, Carl Adolph, a graduate of the Northwestern University Medical School, Ill., 1913; licensed in California, 1915; and a member of the Medical Society of California; died in Camp Greenleaf, Ga., November 5, 1918.

Dawley, Chas. G., a graduate of the University of Southern California, 1903; licensed in California, 1903; a member of the Medical Society, State of California; died October 9, 1918, of broncho-pneumonia.

Evans, C. L., a graduate of University of California (Los Angeles Dept.), 1912; licensed in California, 1912; a member of the Medical Society, State of California; died in Los Angeles, October 25, 1918.

Hanson, Wayne Pierre, a graduate of Jefferson Medical College, Philadelphia, 1912; licensed in California, 1913; a member of the Medical Society, State of California; died in Los Angeles, October 26, 1918.

Hayes, Nellie S., a graduate of University of Southern California, 1904; licensed here, 1904; a member of the Medical Society, State of California; died in Los Angeles, October 11, 1918.

Mills, Herbert C., a graduate of the College of Physicians and Surgeons of San Francisco, 1901; licensed in California, 1901; died in Berkeley, October 22, 1918; pneumonia following Spanish influenza.

Welin, Albert Fabian, a graduate of Stanford University Medical School, 1915; licensed in California, 1915; died in Camp Kearny, Calif., October 21, 1918, of pneumonia following influenza; was a member of the Medical Society, State of California.

Harvey, W. P., San Francisco; a graduate of the University of California, 1900; licensed in California, 1900; died in San Francisco, October 27, 1918.

Artigues, Joseph Emile; a graduate of Cooper Medical College, 1887; licensed in California, 1888; a member of the State Medical Society; died in San Francisco, October 22, 1918.

McGuffin, Robt. Kenton; a graduate of Maryland Medical College, Md., 1911; licensed in California, 1914; died in Camp Kearny, Cal., October 20, 1918.

Allen, Edgar Mosher; a graduate of Rush Medical College, Ill., 1911; licensed in California, 1914; died in Los Angeles, October 20, 1918; was a member of the Medical Society, State of California.

Kelly, Alexander S.; a graduate of the Cooper Medical College, California, 1901; died in Oakland, Cal., October 24, 1918.

Cluness, Wm. Robt., Alameda, Cal.; a graduate of the Queens University, Kingston, Ont., 1859; died in Alameda, Cal., September 26, 1918.

Doyle, James F.; a graduate of College Physicians and Surgeons, Illinois, 1886; licensed in California, 1911; died in Santa Ana, Cal., October 1, 1918.

Bennett, Irwin Edmund; a graduate of Jefferson Medical College, Pennsylvania, 1891; licensed in California, 1912; died in San Francisco, October 30, 1918.

Burks, W. T.; a graduate of the College of Physicians and Surgeons, San Francisco, in 1900; licensed in California, 1900; died in Fresno, October 28, 1918.

Dodds, Thos. G.; a graduate of University of California, 1907; licensed here, 1907; died in Oakland, Cal., October 28, 1918.

Williamson, Wm. P.; a graduate of the McGill University, Montreal, Canada, 1891; licensed in California, 1894; died in San Diego, Cal.

Hancock, David Robert; a graduate of the Starling Medical College, Ohio, 1892; died in Redondo, Cal., October 14, 1918.

Fretwell, Wm. J.; a graduate of Missouri Medical College, 1888; licensed in California, 1896; died in San Jose, Cal., November 5, 1918.

Cook, Wm. J.; a graduate of Baltimore Medical College, 1895; licensed in California, 1901; died in Long Beach, Cal., October 26, 1918.

Radcliffe, Wm. M.; ;a graduate of Jefferson Medical College, Pennsylvania, 1889; licensed in California, 1914; died in Los Angeles.

Morrison, Maude Leontine; a graduate of University of Southern California, 1917; licensed in California, 1917; died in Pasadena, Cal., October 22, 1918.

Campbell, H. T.; a graduate of University of Nashville, Tenn., 1898; licensed in California, 1901; died in Nashville, Tenn.

Stone, Joseph Wm.; a graduate of Jefferson Medical College, Philadelphia, Pa., 1913; licensed in California, 1916; died in Seattle, Wash., Oetober 16, 1918; was a member of the Medical Society, State of California.

Schwartz, Edward I.; a graduate from the College of Physicians and Surgeons, Southern California, 1918; licensed in California, 1918; died October 21, 1918.

Fanton, Clark Denike; a graduate of State University of Iowa, 1915; licensed in California, 1916; died in a military camp in California.

Regli, Joseph; ;a graduate of University of Georgetown, Washington, D. C., 1902; licensed in California, 1903; died in San Jose, Cal., October 24, 1918.

Chubb, Florence J., San Francisco; a graduate of the University of California, 1918; licensed in California, 1918; died October 27, 1918.

OCT 16 1918

REPORTING OF EPIDEMIC DISEASES

By WM. C. HASSLER, M. D., Health Officer

A Request to the Physicians of San Francisco:

The Board of Health of San Francisco calls the attention of all physicians of this city to the fact that "Influenza," and its chief complication "Pneumonia," are reportable diseases, and asks an earnest co-operation at this time not only because the law requires the reporting of these diseases, but in so doing a large measure of protection is afforded the civil population.

The menace of an epidemic in this city is very great, communication with the Eastern centers is open and the disease there is rapidly spreading.

Eastern people who were contacts with the disease, convalescents, and carriers are undoubtedly arriving daily, but vigilance and rigid control of new cases and their contacts, especially in the incipient stages, will limit the incidence in San Francisco.

This menace is not to be minimized by the present favorable weather conditions. We are approaching the rainy season and while the epidemic lasts on the Atlantic Coast we must be more expectant of its occurrence here, especially when the weather conditions are more unfavorable and when people are more exposed to its changes.

All reports from Europe point out the fact that home isolation, rest in bed, and rational symptomatic treatment in the first stages, result in rapid and uncomplicated recovery.

Carelessness and indifference results in serious complications and sequelae; pneumonia is most to be feared and is the chief cause of death.

Its onset is rapid, the course severe and the percentage of fatalities high.

The symptoms at the onset of Spanish influenza as recorded in the British Medical Journal dated July 27, 1918, are briefly given as follows:

There are two main varieties of Spanish influenza. One begins with chills or chilliness, which may be slight. There will be what appears to be an ordinary cold, catarrhal, with coughing and sneezing, headache, backache, fever and prostration. The other is marked simply by chills, fever and prostration. Both forms may be marked by nausea and vomiting.

It may be distinguished from those of an ordinary cold by prostration and aches and pains in the head and back. There is no protracted period of waiting to know whether your cold is influenza. If you have it you'll probably know it the first day.

Prophylaxis for Contacts and non-infected:

It is a respiratory disease, therefore mouth, nose and throat hygiene is the primary essential.

A medical officer who claims experience with the disease in Europe states that "powdered Boric Acid" used as a snuff and gargling with Dobell's or similar antiseptic solution, acts as a specific preventive. The solutions are recommended also for nasal douching or in spray by atomizer.

Patients, contacts and nurses should be warned regarding sneezing and coughing, as droplet infection is a direct means of spreading the infection; handling of bed linens, handkerchiefs and other articles of a patient, particularly if of the pneumonic type, are also a means of its spread.

Remedies recommended for the patient vary, but aspirin, the salicylates and quinine are most highly recommended, plus such symptomatic drugs as may be indicated by the complication.

We expect shortly to have a vaccine ready, which physicians can obtain free. Its value while not fully established is reported as preventive.

In times of epidemics every physician should consider himself a member of the staff of the Board of Health and every available facility of the Department is at his disposal.

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL LIBRARY

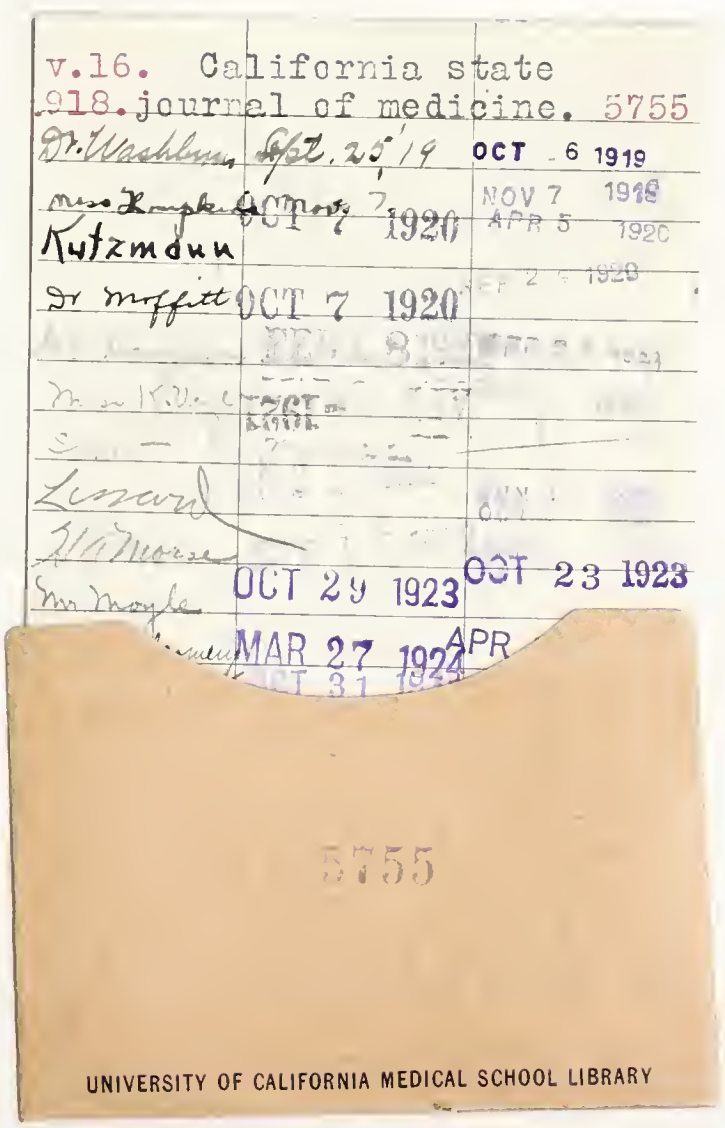
THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

Sept 25, '19
OCT 7 1920

OCT 29 1923
MAR 27 1924
OCT 31 1935

JUN 2 1946
DEC 18 1952

1m-11,'18


v.16. California state
918. journal of medicine. 5755
Dr. Washburn 9/22. 25 19 OCT 6 1919
miss Lapke OCT 7 1920 NOV 7 1919
Kutzmann APR 5 1920
Dr Moffitt OCT 7 1920
Leonard
Dr Moyle OCT 29 1923 OCT 23 1923
MAR 27 1924 APR
5755
UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL LIBRARY